URANIUM ENRICHMENT

HEARING

BEFORE THE

SUBCOMMITTEE ON
ENERGY RESEARCH AND DEVELOPMENT

OF THE

COMMITTEE ON
SCIENCE, SPACE, AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

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URANIUM ENRICHMENT

THURSDAY, OCTOBER 6, 1988

HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
Washington, D.C.

The Subcommittee met, pursuant to notice, at 9:30 a.m., in Room 2318, Rayburn House Office Building, the Honorable Marilyn Lloyd presiding.

Mrs. LLOYD. The Subcommittee will come to order. Before I begin, I ask that these proceedings be recorded for the public by the media and without objection so ordered. Today's hearing is on the question of whether or not to establish a uranium enrichment corporation to conduct the uranium enrichment business now operated in the Department of Energy.

Several bills have been introduced to accomplish this purpose. H.R. 4934, H.R. 4975, and H.R. 4489 are but some of them. The Administration has proposed establishing a Federal corporation in the implementing legislation for the United States-Canada trade agreement. This proposal, however, was withdrawn because the principal Committees in the House objected to including it without a full hearing on the issues.

From the Science Committee's perspective, I should note that several years back we established a Uranium Enrichment Advisory Committee with many business and utility industry leaders to advise us on the enrichment program. Later, this Advisory Group was rechartered into the Tri-Committee Business Advisory Panel sponsored by the Science, Space, and Technology Committee, the Energy and Commerce Committee, and the Interior Committee.

The advice we received from these panels has been consistent over the years. Essentially it was that the enrichment enterprise should be made into a more businesslike operation to better respond to the marketplace and remove it from political influence. The recommendations in accomplishing this purpose range from establishing a revolving fund to the current proposals to form a Federal corporation.

The proposals to establish a Federal corporation gained momentum and urgency when it was disclosed two years ago that the Department of Energy would require appropriations well beyond the enrichment revenues. These excess appropriations ranged anywhere from $200 million to $1 billion in each Fiscal Year. Today, however, the excess appropriation argument has largely dissipated with DOE's recent analysis that excess appropriations of about $150 million might be expected in Fiscal Year 1990. But thereafter,

the business would have a positive net cash flow and this assumes a full commitment to deploy the AVLIS technology beginning in Fiscal Year 1996.

Clearly some of the urgency of forming a Federal corporation has been dissipated although circumstances can change and we should not ignore the continuing need to provide businesslike flexibility to the enterprise. Because I believe that politically-driven program decisions have inflated the price of electricity derived from enriched uranium, I remain favorably inclined toward reorganization of the business.

Unfortunately the legislative proposals for forming a Federal corporation are captive to expensive programs to subsidize the uranium mining industry. Additionally, issues concerning a payback to the Treasury of funds previously invested in the enrichment program threaten to hobble the corporation before it even gets started. Burdened with these circumstances and costs, the enrichment business would stand little chance of succeeding under the private corporation.

I believe that we must separate these issues from the issue of reorganization of the enrichment business if we're going to rationally discuss the substance of legislation to form a Federal corporation. I hope we can fully discuss these and other issues at today's session. We do have a list of very knowledgeable witnesses who can provide us with advice on how we should proceed.

Before we do proceed with our first witness, I ask unanimous consent that the opening statement of the Honorable Sid Morrison, whom I greatly admire and respect for his insight in matters under the jurisdiction of this Subcommittee, be included in the record at this point.

[The prepared opening statement of Hon. Sid Morrison follows:]

OPENING STATEMENT

ERD HEARING ON URANIUM ENRICHMENT LEGISLATION

HON. SID MORRISON

OCTOBER 6, 1988

GOOD MORNING. I AM PLEASED TO JOIN MADAM CHAIRMAN AND MY COLLEAGUES OF THE SUBCOMMITTEE IN HEARING TESTIMONY ON THE PROPOSED URANIUM ENRICHMENT LEGISLATION TODAY.

OVER THE LAST TWO DECADES, OUR URANIUM ENRICHMENT ENTERPRISE HAS GONE THROUGH SOME GOOD AND BAD TIMES. THE PROBLEM OF ESTIMATING DEMAND AND SUPPLY, THE DISPUTE REGARDING CAPACITY CHARGES WITH THE TVA, AND THE MINERS' LAWSUIT, HAVE ALL CHALLENGED THE MANAGEMENT OF THIS ENTERPRISE BY THE DEPARTMENT OF ENERGY.

RECENTLY, THE GRADUAL REMOVAL OF URANIUM IMPORT RESTRICTION, COMPOUNDED BY THE U.S.-CANADIAN FREE TRADE AGREEMENT, HAS FUTHER INCREASED THE NEED FOR US TO TAKE LEGISLATIVE ACTION TO ENSURE OUR COMPETITIVENESS IN THE WORLD MARKET FOR URANIUM ENRICHMENT. THERE IS NO QUESTION THAT OUR ENRICHMENT PROGRAM SHOULD BE RESTRUCTURED, AND ESTABLISHING A GOVERNMENT-OWNED CORPORATION SEEMS TO BE THE BEST OPTION.

THE BILLS BEFORE US TODAY PROPOSE TO DO JUST THAT. THESE BILLS HAVE BEEN REFERRED TO FOUR HOUSE COMMITTEES, EACH FOCUSING ON A DIFFERENT AREA OF INTEREST. I THINK TODAY'S HEARING WILL HELP US

GAIN A BETTER UNDERSTANDING OF HOW DOE, THE INDUSTRY, AND CONGRESS CAN WORK TOGETHER AND COME UP WITH A LEGISLATIVE VEHICLE THAT WOULD EFFECTIVELY ENHANCE THE COMPETITIVENESS OF OUR URANIUM INDUSTRY. FROM THE SUBCOMMITTEE POINT OF VIEW, A STRONG URANIUM ENRICHMENT ENTERPRISE IS PARTICULARLY IMPORTANT, BECAUSE OF DOE'S PLAN TO DEMONSTRATE THE ATOMIC VAPOR LASER ISOTOPE SEPARATION (AVLIS) TECHNOLOGY IN FULL SCALE WITHIN THE NEXT THREE TO FOUR YEARS. SUCCESSFUL MANAGEMENT OF THE ENTERPRISE WILL ENSURE THE IMPLEMENTATION OF THE AVLIS TECHNOLOGY, WHICH GIVES US GREAT PROMISES FOR THE FUTURE.

Mrs. LLOYD. Our first witness is the Honorable Ted Garrish, Theodore Garrish, Assistant Secretary for Nuclear Energy in the Department of Energy. We do welcome you before the Subcommittee. We look forward to hearing the Administration's views on the various legislative proposals and I do want to thank you for breaking a logjam on my request to the Department for the information concerning the projected cash flows in the enrichment business. I do appreciate this. It has been very helpful in understanding the nature of the business situation facing the enrichment enterprise. Please proceed, Ted.

STATEMENT OF THEODORE J. GARRISH, ASSISTANT SECRETARY, NUCLEAR ENERGY, DEPARTMENT OF ENERGY.

Mr. GARRISH. Thank you very much, Madam Chairman. It's a pleasure for me to be here this morning. First, I'd like to thank you and the Committee for your tremendous support over the years. You have been a very great supporter of our programs and I appreciate the opportunity to appear here.

Mrs. LLOYD. I must say at this point that I have enjoyed working with you and look forward to seeing you in the future.

Mr. GARRISH. And your staff has been particularly helpful, too, and I'm sorry to see Jack Dugan be leaving the Congress and leaving your staff. He has been very supportive of our programs over the year and very helpful and we wish him well.

Mrs. LLOYD. Thank you very much.

Mr. GARRISH. I have asked Phil Sewell to join me this morning so we could respond to all of your questions as much as possible and I'd like to, if I could, ask that my written statement be included in the record and that I provide you a summary of that.

Mrs. LLOYD. Without objection, your statement is a part of the record and, therefore, you may proceed at this point as you wish.

Mr. GARRISH. Madam Chairman, I believe that this morning's discussion comes at a very critical time, a time when the availability of nuclear power will be extremely significant to our energy future. Nuclear power currently provides approximately 20 percent of our nation's electrical needs and it decreases our reliance on imported oil. It offers a clean source of energy, free of the emissions that generate environmental concerns such as acid rain.

Having a strong and viable industry and enrichment enterprise, we believe, is critical for the future of the nuclear option. The nuclear industry provides jobs for the economy and an improved balance of trade. Nevertheless, we believe that there is concern about the status of uranium mining and uranium enrichment enterprises. Both face serious problems today. We face strong foreign competition and we are experiencing financial and economic hardships in this program.

We believe the Administration's proposal to revitalize the uranium industry and restructure the enrichment enterprise is a sound and comprehensive approach to the problems of these industries. The enrichment proposal, we believe, is an important bill to our energy future. The proposal goes a long way to solve many of the problems which have plagued this enterprise.

Most importantly, we believe that the proposal begins to move the enrichment enterprise into the private sector and that will provide tremendous benefits and efficiency and ultimately to complete transfer of the enterprise into the private sector. We believe that the proposal also helps to revitalize the uranium industry which has had great difficulty over the years.

A number of years ago, Congress enunciated a policy to ensure a viable industry and it stated, and I would like to quote, "The maintenance of a viable domestic industry is an integral part of a sound nuclear industry and may indeed be closely intertwined with the defense and security elements of the United States."

Achieving it, however, has not been as easy to do as it has been to say. We have had two major boom and bust cycles and we believe that the purchase program will go a long way to help solve this problem once and for all. Finally, we believe that the legislation gets on with the important problem of reclamation and the cleanup of our mill tailing sites.

Overall, our proposal accomplishes these tasks with virtually no net Federal expenditures and settles a very longstanding contentious issue. Notwithstanding these benefits, a number of misconceptions still exist about the legislation which I would like to address this morning.

First, there has been a misconception that the proposal will require huge Federal subsidies. The facts are we believe that this is not a subsidy program and that no outlays from the Federal Treasury are required. The U.S. Government would appropriate no funds to the uranium revitalization initiative and the corporation would provide $450 million back to the U.S. Treasury from revenues collected from its customers. In return, the corporation receives uranium valued at $750 million. This uranium would allow the corporation to save at least $400 million in power costs.

The second misconception is that the proposal will result in a $9 billion bailout of the uranium enterprise. The facts are that not only is there no bailout, but the Administration approach we believe maximizes recovery of government investment. No one is more concerned than the Administration about the recovery of the investment that taxpayers have made in our enrichment enterprise, but we don't believe that we have a debt.

We believe rather that we have an unrecovered government investment and our proposal to restructure that would provide for government-owned stock corporation and that would provide, we believe, the best means of recovering our government investment.

We have two forms in which we will receive a return to the taxpayer. One is through the dividend stream which we believe will be substantial in future years and the numbers have been provided to the Committee, and eventually through the sale of stock of our government corporation we believe that the taxpayers' investment will be fully recovered.

Eventually, we believe that the enterprise will generate a positive cash flow of nearly a billion dollars by 1995 and these dividends will be paid directly back to the Treasury. The strong cash flow position of the corporation will encourage the purchase of its stock and the potential return of several billion dollars of Treasury

after the dividend stream is complete, will be provided after the year 1995.

The third misconception we believe is that the proposal will impose a heavy burden on taxpayers and ratepayers. In fact, there is no taxpayer burden and only a minuscule cost to nuclear utility ratepayers. No monies have been provided by the Treasury and, therefore, there is no tax impact. The cost increase to ratepayers is approximately 2.5 cents per month at a maximum.

It could be less based on power savings from overfeeding uranium at our enrichment facilities. The ratepayers benefit from a more efficient enrichment enterprise and from a healthier domestic uranium industry. We believe the taxpayers will receive a greater return on their investment in the enterprise through the dividends they receive and potentially through the sale of future stock.

The fourth misconception we believe is that the proposal represents a waiver or an escape from responsibilities for cleanup of uranium mill tailings. The fact is that the proposal does not diminish the responsibilities for mill tailings cleanup. Rather, it expedites environmental compliance and settles once and for all this issue. It requires full application of EPA's standards and, therefore, we see no escape from the environmental responsibilities that have been placed upon the uranium mill owners.

The proposal encourages earlier and more efficient cleanup. The delays, we believe that by failing to pass this legislation, will only result in increased costs and an increased burden of all those that are responsible.

In conclusion, we believe that the Administration's proposal will ensure the health and viability of the two key nuclear industries. The restructuring, we believe, offers solutions to a longstanding and difficult and contentious problem for the uranium industry, helps ensure a strong sales base and financial strain for both the uranium and enrichment industries.

It provides an opportunity for a maximum return to taxpayers. It facilitates resolution of environmental issues on the uranium mill tailings issues and it is compatible but free and open trade. The legislation to restructure the enrichment business and revitalize the U.S. uranium mining industry is needed now. We believe that a timely and decisive action by Congress is called for and we are eager to work with the Congress in trying to find solutions to this very difficult problem.

We would be pleased to respond to your questions.

[The prepared statement of Theodore J. Garrish follows:]

STATEMENT OF THEODORE J. GARRISH
ASSISTANT SECRETARY FOR NUCLEAR ENERGY
U.S. DEPARTMENT OF ENERGY
BEFORE THE
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
U.S. HOUSE OF REPRESENTATIVES

OCTOBER 6, 1988

Good morning Madam Chairman. My testimony today will focus on current efforts to address the needs of both the United States uranium enrichment enterprise and the domestic uranium industry. As you are aware, recent efforts of Congress and the Administration have dealt with this issue, and several bills have been introduced which address the needs of the domestic uranium industry.

Energy security and national security provide strong motivation for maintaining an efficient, stable, and economically competitive uranium enrichment enterprise in the United States. Nuclear power contributes approximately 20 percent of our Nation's electric power and is an important part of ensuring that Americans will have an adequate and reliable supply of electricity now and in the future. The low cost electricity from nuclear power that is generated by 40 domestic utilities supports stronger economic growth, and increased domestic employment. The benefits of a secure, low cost source of nuclear energy require a reliable and economical supply of enriched uranium--free of the threat of foreign supply disruptions or price controls. In addition, foreign commercial sales of enriched uranium amounting to about $500 million each year aid in the Nation's balance of trade and contribute to the Nation's nuclear nonproliferation efforts through our involvement in the nuclear fuel cycle of foreign countries. Finally, important national security objectives are

supported by the availability of a secure, dependable supply of enriched uranium at reasonable costs for U.S. naval forces and other defense programs.

Madam Chairman, over the years, the Department has managed the enrichment enterprise in the most professional, businesslike manner possible. We have provided a stable, reliable supply of enrichment services to meet energy and national security needs. We have offered flexible contract terms and prices while continuing to meet our legal mandate to recover the Government costs. We have retired unneeded facilities, focused our research and development efforts, and increased sales. Our overall objective has been, and continues to be, to make enriched uranium of U.S. origin as economically attractive as possible to our customers.

These actions have proven to be effective in addressing some of the challenges that have beset the program. More remains to be done, however. The uranium enrichment and uranium mining industries still face serious problems today. Both face strong foreign competition and both are experiencing financial and economic hardships as a result of reduced demand. In addition, conflicting objectives, varied interpretations of the Atomic Energy Act, and the interplay of special interests have frustrated attempts to manage the enrichment enterprise in a businesslike manner.

The enrichment enterprise needs to be provided with flexibilities characteristic of private industry. To compete more effectively, the enterprise needs market-based contract terms and prices, and efficient management of long-term operational costs. The miners need a healthier,

more robust demand for domestic uranium, and mill tailings at active sites need to be cleaned up.

Several legislative proposals have been introduced which address these needs. My comments today will present the Administration's position on these key issues.

THE URANIUM MINING INDUSTRY

Over the last 20 years, the U.S. Government has consistently recognized the importance of a domestic uranium industry to meet national security and energy security interests. However, this industry has experienced substantial changes that have contributed to a disturbing degree of instability. This effect has been reflected most visibly in the form of two boom and bust cycles. As a result of these market disturbances, Congress has proposed various forms of corrective measures for this industry to protect the Nation's interests.

The genesis of the initial boom and bust cycle occurred in the early 1950's, when the U.S. Government's needs to meet expanding military requirements were greater than the available capacity of the uranium industry. To rectify this situation, the U.S. Government instituted a production incentive program that in effect created both the domestic and foreign uranium producing industries. This incentive program was so successful, and stimulated so much production, that by the early 1960's, the Government was forced to cut back deliveries of uranium. The result was a decline in demand for both uranium and uranium enrichment continuing until the late 1960's.

As the domestic uranium industry retrenched in the face of this reduced demand, considerable attention focused on the most appropriate means to maintain its long term health and vitality. In 1964, Congress enacted section 161v of the Atomic Energy Act, 42 U.S.C. 2201(v), directing the Atomic Energy Commission (AEC) to provide protection for the fledgling uranium industry by requiring that it restrict the enrichment of foreign uranium for domestic use "to the extent necessary to assure maintenance of a viable domestic industry." In doing so, Congress noted, "The maintenance of a viable domestic industry is an integral part of a sound nuclear industry and may, indeed, be closely intertwined with the defense and security interests of the United States" (S. Rept. 1325, 88th Cong., 2nd sess. reprinted in (1964) U.S. Code Cong. & Adm. News 3105, 3135). As a result, a 100 percent restriction was established by AEC criteria in 1966, and incorporated in the Department's enrichment sales contracts. These actions contributed markedly to the subsequent resurgence of the domestic uranium industry.

In addition, demand for both natural uranium and uranium enrichment increased in the late 1960's and the early 1970's following over 200 orders for nuclear power plants in the United States and the optimistic projections for operation of these plants. At the same time, world demand was projected to grow dramatically. In response to this expected growth in demand, U.S. uranium production increased substantially. The domestic mining industry was reaching its maximum capacity and there was a rapid escalation in uranium prices and exploration activity. As expected, the domestic mining and enrichment industries prospered.

Because it was felt that the health and vitality of both industries would be maintained, the U.S. Government decided that restrictions on the use of foreign-origin uranium in domestic power reactors could be gradually reduced without serious adverse effects on the U.S. uranium industry and, therefore, a plan was announced to remove these restrictions beginning in 1974 and ending by 1984.

Unfortunately, the large growth projected for both the U.S. uranium and uranium enrichment industries did not materialize. Demand for electric power lagged behind the projected growth rate following the oil price shocks in 1973 and 1978. The lead times for reactor licensing and construction lengthened, and continuing escalation in labor, materials, and financing costs added significantly to the construction costs of nuclear power plants. In addition, rising interest rates in an inflationary U.S. economic environment exacerbated the problems of the electric utilities attempting to construct and operate nuclear power plants. In response to these developments, a sizeable number of planned nuclear power plants were either cancelled or postponed, thereby substantially reducing demand for both uranium and uranium enrichment.

One of the side effects of this bust or down cycle in demand during the 1970's was that a number of domestic uranium producers ex'ed the business, leading to the abandonment of mill tailings at inactive sites. This potentially hazardous situation led to congressional interest in a corrective course of action on these abandoned sites as well as addressing the need for future cleanup responsibilities at current active sites.

Reflecting concern for the public health and safety. Congress enacted the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901-7942). As a result. a Federal program was put in place to correct two major problems affecting the industry--the disposition of abandoned mill tailings sites and the clear assignment of responsibility for the cleanup of active sites to the then-current owner licensees.

The domestic industry continued to deteriorate and its problems were further exacerbated by discoveries of high grade. low production cost ore bodies in countries such as Canada and Australia. The decline of the U.S. mining industry involved dramatic decreases in employment. capital expenditures. operating plants. and production levels as a result of a downward readjustment in demand. The spot market price for U.S. natural uranium plummeted from $44 per pound of U308 in 1979 to about $17 per pound in 1987. This price reduction was directly related to both the lower price that foreign suppliers were able to offer due to their higher ore quality and the large existing stockpiles of natural uranium that were being sold on the secondary market. For example. the total uranium inventory held by U.S. utilities at the end of 1985 represented over 4 years of forward needs. The net result of the market reaction to this oversupply situation culminated in a reduction in market share in the United States for the domestic mining industry from 90 percent in 1981 to about 55 percent in 1986.

These events again drew congressional attention to the problems of the domestic uranium industry. particularly in light of the phase-out of restrictions on the use of foreign uranium. A number of steps were proposed and finally in 1982. Congress enacted section 170B of the Atomic

Energy Act requiring the Secretary of Energy to determine the viability of the domestic uranium industry on an annual basis. With such a determination, the most appropriate corrective actions could potentially be identified. The enactment of section 170B instituted a review procedure to assure continued congressional oversight. Of particular concern was the volatile nature of supply and demand in the uranium market as evidenced in the past.

The Secretary of Energy confirmed the decline of the domestic uranium industry in three subsequent consecutive findings of nonviability in 1984, 1985, and 1986, as required by enactment of section 170B. The Secretary found the industry nonviable as determined by two of the criteria by which the industry was to be measured--supply response capability and financial capability. Although slight improvement was noted in 1987, the basic indicators remain pessimistic regarding prospects for an early dramatic recovery.

It is against this backdrop that Congress and the Administration have labored to formulate some way of bolstering the beleaguered uranium industry. Earlier this year, the Senate addressed this problem by the passage of S.2097. However, this bill included objectionable trade restrictions which would lead to a Presidential veto. This led the Administration to reach an accord with representatives of the mining and utility industries--one which would offer a solution to the problem, consistent with the Congressional interest in assuring the viability of the industry, but one also consistent with the Administration's free trade policies.

The Administration's proposed approach was directed toward the attainment of multiple goals--stimulation of demand for domestic uranium, timely attention to the need for mill tailings remedial actions at active sites, and establishment of a wholly-owned Government corporation to assume the responsibilities of the enrichment enterprise.

REVITALIZATION INITIATIVES

In addressing the issue of industry viability and the need for long-term stimulation of demand for the domestic uranium industry, the Administration has developed a package which is consistent with its commitment to free and open trade and at the same time would take strong and definite steps to provide a more viable uranium industry for our country.

The Administration's objectives would be achieved in part by a uranium purchase program that would provide for a $750 million purchase program of domestic uranium. Purchases would be spaced over 6 years and the uranium would be made available to the proposed enrichment corporation for overfeeding. This would be a much needed stimulus to a stagnant industry by bolstering sales, employment and eventually exploration. Furthermore, this concept would preserve the competitive position of smaller mining companies by initially providing for sales from them on a preferential basis and assisting in the early need for capital formation. Both small and large mining businesses would subsequently benefit, thereby maintaining a broader industrial base for uranium mining.

RECLAMATION OF MILL TAILINGS SITES

The Administration's proposed approach also includes an identical program for mill tailings cleanup as specified in H.R. 4934. H.R. 4975. and S.2443. The Department recognizes that the cost associated with tailings reclamation at active sites represents a major issue for many in the uranium mining and milling industry. All of the legislative proposals retain the provision that the owners of active sites bear the responsibility for one-third of these reclamation costs and for all costs above an inflation-indexed upper limit. The Department would support efforts to encourage these licensees to complete the remedial actions for which they are responsible.

URANIUM ENRICHMENT STRUCTURAL CHANGES

At this time. the Executive Branch is prohibited from studying or proposing privatization for the Department's enrichment activities. However. based on previous studies. the Administration continues to believe that the uranium enrichment enterprise should be restructured to be more commercially oriented. One of the goals of the Administration is to transfer to the private sector those current Government functions that can best be performed by the private sector. The uranium enrichment enterprise has all of the key commercial characteristics for privatization.

To accomplish an effective transition from a Government-managed program to the private sector. the uranium enrichment business. first and foremost. must be healthy. profitable. and well managed. A major step in this

direction would be accomplished by establishing a wholly-owned Government corporation for uranium enrichment. Such an entity, with a corporate-like structure, stock held by the Treasury, and increased flexibility in marketing, contracting, management, and administration could begin the process of establishing a more stable, commercially attractive business. Operation in this mode would also provide time to prepare for the transition to full privatization by addressing issues such as Nuclear Regulatory Commission (NRC) licensing. In the future, stock could be sold to the private sector and one or more private corporations established. The issuance of stock in an amount reflecting the Government's investment in the enrichment enterprise, and its eventual sale, can serve as an effective vehicle to ultimately privatize this enrichment enterprise. This could offer an opportunity to maximize the return on the Government's investment.

Creating an efficient mechanism for recovery of the Government investment by authorizing the issuance of stock represents just one of the benefits of providing the Government corporation with features more characteristic of a private business. Other features of a proposed Government corporation that are essential to its success include self-financing authority with the ability to borrow from the public for project financing, marketing independence, and flexibility to effectively compete in the marketplace. Similarly, any final legislation should be amended to include a private sector type board of directors, subjecting the corporation more immediately to NRC, Environmental Protection Agency, and Occupational Safety and Health Administration jurisdiction, having the uranium revitalization fund and the

corporation subject to apportionment, and eliminating legislative bypass authority.*

Another bill, H.R. 5181, has also been introduced that takes a different approach for the enrichment corporation. While we have a number of objections to specific features of this bill, we have particular concerns over the level of capitalization and the associated large payments to Treasury. If the corporation is not able to generate sufficient funds to make these payments, then the bill would require that these payments be made through a "tax" on the utilities. This provision is unacceptable because it violates normal competitive practice and restricts the ability of the corporation to attract customers. We believe the provisions of S.2443, H.R. 4934, and H.R. 4975, with the above-mentioned amendments, are superior in that normal market forces are allowed to work while permitting the Government to receive the maximum return on its investment in uranium enrichment.

The uranium initiatives we have proposed, coupled with the restructuring of the enrichment enterprise, would significantly enhance these two key nuclear industries. They would help ensure a substantial sales base and provide the basis for financially strong companies in the uranium enrichment, mining, and milling industries. They would provide increased pricing flexibility for the enterprise to meet foreign competition, and

*The Department of Energy has been advised by the Department of Justice that H.R. 4489 raises some constitutional concerns with the formation and administration of the corporation. Specifically, Justice believes that sec. 1501(b)(7) unconstitutionally limits the President's removal power. Justice also raised concerns about sec. 1402(c) to the extent that this provision might be interpreted to confer independent litigation authority on the corporation.

nuclear industries. They would help ensure a substantial sales base and provide the basis for financially strong companies in the uranium enrichment, mining, and milling industries. They would provide increased pricing flexibility for the enterprise to meet foreign competition, and permit the flow of substantial dividends to the U.S. Treasury. They could also provide the opportunity for lower nuclear fuel costs to utilities which could be passed through as rate decreases to ratepayers. This legislation would effectively solve a longstanding issue plaguing the U.S. mining industry. The net effect of these benefits would help strengthen the national and energy security of the United States.

We believe this proposal represents a sound, effective approach to the problems confronting the U.S. mining industry and the enrichment enterprise--one that is consistent with free and open trade. In addition, it would provide the potential for maximum return on the Government's investment in the enrichment enterprise on a timely basis.

CONCLUSION

The Administration's proposal provides much needed revitalization to ensure the future health and vitality of two key nuclear industries. The Administration supports freestanding legislation, such as H.R. 4934 and H.R. 4975, with the amendments mentioned above, to implement this proposal.

Restructuring the enrichment enterprise and revitalizing the U.S. mining industry is highly desirable. It offers a solution to a longstanding, difficult, and contentious problem for the uranium industry. It would help

ensure a strong sales base and financial strength for both the uranium and enrichment industries. It would provide the opportunity for maximum return to taxpayers on the Government's investment in enrichment. It would facilitate resolution of environmental issues on uranium mill tailings. and finally. it is compatible with free and open trade.

Legislation to restructure the enrichment enterprise and revitalize the uranium mining industry makes sense. It is good for the nuclear industry. It is good for the country. Timely. decisive action by Congress is needed. The Administration encourages Congress to enact legislation consistent with its recent proposal. We would like to work with Congress to refine details as necessary to complete this important action. Your active support. Madam Chairman. is critically important.

Mrs. LLOYD. Thank you very much, Ted. In your July 25th response to my letter, you enclosed a cash flow table indicating a growth demand for the enrichment service and thus growing income in the period after 1999. What do you expect to be the source of these increased sales?

Mr. GARRISH. Well, after 1995, we believe that there will be a slow growth of approximately two million SWUs from that time forward, and it will be primarily in the far east, Japan, Taiwan, and Korea. We believe that their programs will increase. They will increase our demand for SWUs and we will also get a larger share of their market.

Mrs. LLOYD. Have you had any commitment in this regard from these countries, the pacific rim countries?

Mr. GARRISH. We have had considerable discussions with the Japanese with regard to purchase and our overall program. They have been very supportive over the years and they have indicated—

Mrs. LLOYD. There is no contractual obligation at this time.

Mr. GARRISH. There is no contractual obligation. However, they have indicated to us if we can remain competitive and put on-line some of these advanced technologies that would guarantee lower SWU costs, they believe that they will be good and long term customers and that our markets will increase.

Mrs. LLOYD. How about the European market? Is there anything on that side?

Mr. GARRISH. There is some possibility there, but I think the main increases will be in the far east.

Mrs. LLOYD. What is going to happen to the AVLIS program in the creation of this corporation? Who is going to pay for it or who would operate the production units?

Mr. GARRISH. The AVLIS program is obviously important to our uranium enrichment future. We believe that with a corporation being formed that those are decisions that the corporation needs to make. However, we believe that it will be a tremendous asset to the new corporation, the new technologies and the advances that have already been made. So we see very strongly the possibility that the new corporation will pick up on these advances and attempt to become more competitive and reducing SWU prices and will probably want to deploy the AVLIS program. But those are decisions that we think should be properly left to the new corporation in a more business-like—

Mrs. LLOYD. But don't you think there should be some directives to a new corporation though from the departmental standpoint?

Mr. GARRISH. Well, in terms of what we are trying to do and move these decisions directly into the private sector, we think that the government has, over a period of time, this has been one of the problems that we've had because there have been so many different people that have had directives to the corporation. There's been the Department of Energy—

Mrs. LLOYD. The point I'm trying to make, we should understand what the directives of the corporation should be before we sign off.

Mr. GARRISH. Well, the encouragement—we think that the corporation will see the obvious benefits from the AVLIS technology. I'm not necessarily certain that I want to saddle the corporation with dotting every I and crossing every T, because we do see the benefits

and we think that the corporation will definitely see the benefits of moving forward.

Mrs. LLOYD. How many employees do we have in Oak Ridge right now that are working in the enrichment program?

Mr. GARRISH. We have approximately 900 employees.

Mrs. LLOYD. Where would the corporate headquarters for the new enrichment corporation be located? Have you made that decision?

Mr. GARRISH. Well, that is a decision that we think also should be left to the new corporation and we're certain there will be a number of possibilities considered. I'm sure that you'll have some suggestions.

Mrs. LLOYD. Would you support Oak Ridge as the corporate headquarters?

Mr. GARRISH. Oak Ridge is a very strong possibility for consideration. We think the corporation will try to look at a number of sites. Obviously the thing that they will look at is the expertise in the community and you do have a strong site there. There are other sites in the country that I'm sure they'll also want to consider, but that will certainly be one of the possibilities.

Mrs. LLOYD. What other sites do you have in mind?

Mr. GARRISH. Well, I think the sites that would be important for a corporation would involve where the expertise currently exists around the country, but that's a judgment that would have to be left definitely to the corporation itself.

Mrs. LLOYD. You're putting that beyond next year, then.

Mr. GARRISH. Yes, indeed.

Mrs. LLOYD. Let me ask you something. How would the Oak Ridge employees be treated? Shouldn't we address this in this legislation since they are involved in the enrichment program?

Mr. GARRISH. There have definitely been some concerns with regard to the future for the employees at Oak Ridge and other places that would obviously be impacted.

Mrs. LLOYD. As you know, Oak Ridge has been anticipated for the location of the AVLIS production facility. Now, of course, I'm very interested in whether or not this would change if a corporation were created obviously.

Mr. GARRISH. Very competent people are obviously going to be needed for the future of this program. The way in which the legislation is currently structured is that the contracts that are in existence will be carried over to the new corporation so that those particular employees working for the contractor would obviously be carried into whatever that new situation is.

I am absolutely convinced that competent people will be needed. I would expect that there will be some expansion in the future and I'm certain that each of these employees will have a future in this program.

Mrs. LLOYD. So you see this as an expansion of opportunities for the employees.

Mr. GARRISH. Absolutely.

Mrs. LLOYD. Another question in this regard. How many employees do we have down at Oak Ridge at the K-25 plant now, enrichment plant? Do you have those numbers?

Mr. SEWELL. Out of the 900 people that work on enrichment at Oak Ridge, about 150 are Federal employees located at the Oak Ridge operations office. The remainder are located primarily at the Oak Ridge Gaseous Diffusion Plant, associated with Martin Marietta Energy Systems. The work they are performing for us includes management, administration, remedial action at ORGDP site, and some very important work on our AVLIS program, especially with respect to uranium processing which has a great deal of merit and attractiveness with respect to making that process more efficient and making it more competitive.

Mrs. LLOYD. What else is going on at the enrichment plant right now? Is this the basis of the activities?

Mr. SEWELL. That is the primary basis of the activities at the Oak Ridge Gaseous Diffusion Plant. That plant is now shut down and we are in the process of placing that in a safe storage condition and going through the first phase of D&D. So those personnel at Martin Marietta and Oak Ridge are primarily dedicated to seeing that the work at Oak Ridge is conducted in a safe, efficient, and productive manner and in working on activities that will continue to support the enrichment program, both in a diffusion area and in the R&D area associated with the AVLIS process.

Mrs. LLOYD. So, you have approximately 900 employees?

Mr. GARRISH. That is correct.

Mrs. LLOYD. It's my understanding that—going to another subject—that the laws implementing the U.S. Canada Free Trade Agreement defines Canadian uranium as domestic uranium. Is this your understanding?

Mr. GARRISH. Yes, that is my understanding. That is correct.

Mrs. LLOYD. Well, if it's treated as domestic uranium, would the provisions of this bill requiring domestic purchases apply to Canadian uranium?

Mr. GARRISH. No, this question has been asked of it. That is certainly not our intention. Our intention for this particular program is that the purchases will be from—of uranium mined in the United States.

Now, the provisions of the bill that are under consideration, which is H.R. 4975, in the definition section which is section 3 (9), it indicates that domestic uranium for the purposes of this legislation means uranium that has been mined in the United States including uranium recovered from uranium deposits by underground mining, open pit mining, strip mining and in situ recovery, leaching and ion recovery.

So, my reading of that—and those recovered from phosphoric acid manufactured in the United States—my reading of this bill and some of the other provisions on the purchase program would indicate that what we mean by domestic uranium is uranium that is actually in the United States and not Canadian uranium.

Mrs. LLOYD. I notice that on page 8 that the Administration proposed buying $750 million worth of domestic uranium. Who is going to pay for these purchases, Ted?

Mr. GARRISH. Well, the purchases are paid for from the fund which includes $1.75 billion in it and from that fund, $1 billion is contributed by the utilities, $300 million from the miners and $450

million is contributed from the corporation. So, it does not come from taxpayer funds but it comes directly from the other parties.

Mrs. LLOYD. Well, as a matter of clarification, would a separate private enrichment corporation be inclined to buy this much uranium without requirement in law to do so?

Mr. GARRISH. Well, the answer to that really gets down to economics. There is a potential, depending on two factors. Number one is the cost of uranium. Number two is the cost of electricity.

If the cost of uranium is lower and the cost of electricity is higher, it's cheaper for the corporation obviously to buy the uranium than the electricity. It's not the current status now, but there is a possibility if one of those two numbers could shift where the corporation might find it to its advantage to purchase uranium.

Mrs. LLOYD. Well, I think the point that I'm trying to clarify—isn't this requirement the kind of political influence that we're trying to avoid by establishing a corporation? Are we coming around the circle?

Mr. GARRISH. Well, I think it really gets down to the question of what the overall purpose of this is and it seems to me that what you have before you is a compromise to try and deal with the very difficult problem that we've had with the uranium industry over a period of years. Obviously in the early 1960s when the uranium program began, the government was in the situation where historically it had production incentives to get people into this industry, to ge the sort of reserves that it needed for its national security purposes.

Then, over a period of time, we had more uranium built up than we had demand. We went through two boom and bust cycles and during that period of time, the Congress enacted the requirement and the need for the maintenance of a viable domestic uranium industry mainly for national security purposes.

So, the answer is that the government got the industry going in every way. In other words, it did it for defense purposes and then began the process of commercializing our entire nuclear option. As a result, we've had a situation in which having gotten the industry into it and we've had requirements over the years on the need for maintaining a viable industry. There are certain responsibilities for all of the parties that are involved and these include not only the utilities but the government and the miners themselves.

What we've tried to do is come up with a compromise that in the long run will fix this problem once and for all. I think it's our inclination that what we need to do is move this entirely to the private sector.

But, we've had a situation where the government bears some of the responsibility and along with the other parties—and what we need to do is work towards a compromise to finally solve the situation.

Mrs. LLOYD. Well, looking back, the Congress determined that the preservation of viable domestic uranium industry was certainly an integral part of a sound nuclear industry and certainly very closely intertwined with our defense and national security interest but now, in 1988, uranium is no longer deemed a scarce commodity.

We've discovered that it is an abundant natural element. So, I'm wondering if the findings of the Congress 24 years ago are still applicable given the knowledge we have of uranium's availability today.

Mr. GARRISH. Well, we need to move this program completely into the private sector but we do bear some responsibilities for the future of this industry. I mean the government has been responsible in creating some of these situations—some of these issues and I think what we need to do eventually is to move the entire program into the private sector and that's what this bill is intended to do. It's not intended to have a continuation of this program but to privatize both the—not only completely so there will be no subsidies at all for the uranium industry, but also the uranium enrichment enterprise.

Mrs. LLOYD. Well, what is it that you're going to be able to do with this legislation that you can't do today to become more competitive. We're looking at including in the cost for uranium and the mill tailings clean-up. Now, how can this business be more competitive than it is today when these costs are now attributed to the business up front? I just really want us to look at the broad issue.

Mr. GARRISH. Well, I think that you're asking two questions, I believe. One of the questions is how do we make the enrichment enterprise more competitive. In other words, what are our needs in terms of the enrichment enterprise? We need flexibility—

Mrs. LLOYD. Well, we want to be more competitive.

Mr. GARRISH. That is correct.

Mrs. LLOYD. Certainly if we're competing on a world market. When I became a Member of Congress, we had 100 percent of the enrichment business and now we're seeing ourselves in a very competitive market. That's the reason we've moved in this direction. Certainly, we know we have to be competitive if we haven't already lost out on most of the purchases around the world but my point is, what is it that we can do with this corporation that we can't do now because we are including in this the mill tailing cleanup, we're including additional costs for uranium that the nuclear industry has to pay—I just want to make sure that we're looking at the broad picture.

Mr. GARRISH. Let me try to address the uranium enrichment corporation because I think that there are a number of points that are important and you have helped us to try to deal with many of these problems. But one, for instance is the question on pricing.

We need to have the pricing flexibility—this corporation needs to be able to price its product competitively. Now, under the current situation, in order for us to price our uranium enrichment services, we must come up with a price internally, we must deal with all of the demands within the Department. The Office of Management and Budget needs to be involved with that.

Then we need to come up here and discuss those matters with the Congress. It is not the kind of situation where we can adjust easily to the demand needs of our corporation.

Secondly, we need to have an efficient demonstration and deployment of the AVLIS program. That has obviously been a controversial issue with the Congress, the Department of Energy, the Office of Management and Budget and a number of other people. We be-

lieve that that decision can be better made by a private corporation.

We think that a private corporation can have contracting flexibilities that do not currently exist to allow them to do things the way a private sector industry would handle those issues. We believe that there are personnel practices where there are restrictions currently. For instance, on getting executives and providing the kind of incentive payments to them the way the private sector would do it in order that we don't have the caps that we have to deal with in terms of salaries.

There are a number of issues where the private sector approach would be very different from having the Department of Energy, the Office of Management and Budget and the Congress trying collectively to make these decisions. It is a very slow and cumbersome process. The Congress has worked with us to try to solve these problems but it's still a very difficult and inefficient way to do it and we think that the corporation offers us the opportunity to move forward and do this more effectively.

Mrs. LLOYD. Well, of course, I think one of the advantages of the private—I have some doubts, some reservations, which are pretty obvious at this point, but I think it is clearly one of the advantages of moving in this direction that the uranium business would not be subjected to political whims—to the vacillations of the Congress under the Administration. Having said that, I still think that we need to look at the broad picture to make sure that what we are doing is taking us in the right direction.

Mr. GARRISH. I agree with you completely.

Mrs. LLOYD. We will have additional questions—I'd like to clarify something right now. We've got some strange things going on in the Congress this week that I haven't seen in my 14 years. The other day, we voted on suspensions for three hours—almost three hours. Now, I think we're going to start in on some of this voting about 11:15. So that I won't have to recess this hearing for a couple of hours, I am going to see if we can't try to finish up in about an hour.

So, for this reason, I am going to ask that you respond to the additional questions that I didn't get to and for all of our witnesses in writing for the record so that our record will be complete.

Mr. GARRISH. Be happy to do that.

Mrs. LLOYD. Your testimony was outstanding and I enjoyed being with you gentlemen today. Thank you very much.

Our next witness is Richard Gennone. He's manager of Fuel Supply for the Public Service Electric and Gas Company. Mr. Gennone, we welcome you today. We look forward to your testimony and again, you may summarize for the record as you wish and your entire statement will be part of the record. Welcome.

STATEMENT OF RICHARD J. GENNONE, MANAGER, NUCLEAR FUEL SUPPLY, ON BEHALF OF THE PUBLIC SERVICE ELECTRIC AND GAS COMPANY.

Mr. GENNONE. Good morning, Madam Chairman. I represent Public Service Electric and Gas. We're the third largest combination gas and electric utility in the United States. Our testimony

today will try to show what the impact of this pending legislation has on an individual utility.

Our nuclear generation represents about one third of our capacity. We have an investment of over $11 billion in these plants. The three plants operated by Public Service use about 1.6 million pounds of uranium a year and we use about 400,000 SWUs.

We have under contract sufficient uranium to cover all our needs through 1996 and 60 percent of this material is Canadian. All of our contracts have market related pricing and as a result we are very sensitive to changes in the market price for uranium.

As an individual nuclear utility, we wish to show the immediate impact of this type of legislation on our rate payers. Any costs or savings that come through this legislation would impact our customers directly. Our interest on their behalf would be keep our fuel costs as low as possible. While DOE must be competitive, the uranium producers feel they must competitive, each individual utility must also be competitive.

Public Service actively supports free trade in uranium. We've supported the U.S. enrichment policies. We've supported domestic producers and we'd support legislation which would mitigate some of these problems.

The pending legislation requires utilities to pay $72 a kg for each kg of uranium loaded into the reactors. In 1988 alone, this would amount to $5.9 million in retroactive payments by Public Service rate payers. We don't consider this a small fund.

Through 1993, the additional cost to our rate payers due to the $72 a kg would be of the order of $37 million. The fund developed by this assessment on the nuclear utilities would allow the Department of Energy to make open market purchases.

Additionally, funds would be expended for mill tailings cleanup. Direct payment to mining companies who are no longer active in the business for tailings cleanup we feel might represent a windfall to these mining companies.

We do feel that a system of competitive bidding to cleanup specialists should be used to handle the tailings cleanup. The issue of mill tailings must be investigated further to provide accurate estimates for the cost of reclamation.

Some of the new costs have shown that the $4.50 a ton is much much too high. We also feel that the general levy of a flat fee on all nuclear utilities is not fair and equitable treatment. Payments into the fund should be based on how much domestic uranium each utility has used.

We also support free trade in uranium over possible SWU savings due to economic considerations. We have in our system of three reactors, we find that if the U3O8 price were to double, it represents a fuel cost increase of 27 percent. On the other hand, increasing the SWU price to a number like $150 per SWU only effects a 15 percent increase.

We agree that DOE must be restructured, that mill tailings must be cleaned and we also agree that the uranium industry must be helped. We support a legislative solution of these issues in order to bring some stability into the nuclear marketplace.

In our dealings with DOE in the past and its predecessor agency, we have gone from requirements contracts to fixed commitment

contracts to adjustable fixed commitments and now we're back to essentially, requirements contracts. We have witnessed one, maybe two, boom and bust uranium cycles. We've heard the doom sayers say there's not going to be any uranium and we now sit in an industry with an inventory of over 200,000,000 pounds of uranium.

The issue of the DOE unrecovered cost and the debt to the Treasury has been debated many times. We feel that there is no debt and that these figures that range from zero to $9 billion with several intermediate figures are just ridiculous.

We consider the pending legislation fixing the cost at $364 million as a positive aspect of this legislation. Nuclear utilities will purchase materials and services from those vendors who offer the best terms and conditions to meet the individual utility needs.

The inflexibility of DOE in contracting policy severely limits their ability to meet this requirement. DOE chartered recover costs for services should be maintained but they should have the flexibility to offer different terms, different prices, different conditions, depending on what the individual customer desires.

I think that we would stand by and we would be willing to assist anyone in solving some of these problems. We've got in our testimony and attachment—we put a few prices and a few scenarios as to the effect of uranium prices and the effects of SWU prices. This concludes our testimony.

[The prepared statement of Richard J. Gennone follows:]

Testimony By

Richard J. Gennone
Manager - Nuclear Fuel Supply

on Behalf of the
Public Service Electric and Gas Company

to the

Subcommittee on Energy Research and Development
Committee on Science, Space and Technology
U.S. House of Representatives

on

Uranium Enriching and Supply

October 6, 1988

Madame Chairman and Subcommittee Members:

I am Richard J. Gennone, Manager - Nuclear Fuel Supply of Public Service Electric and Gas Company. PSE&G is the third largest combination electric and gas company in the United States.

Our testimony today will present an individual utility perspective on the impact of this legislation to our rate payers. Nuclear energy represents almost one-third of our electrical generation capacity and issues which impact the costs of operating these units are extremely important to us.

Public Service Electric and Gas is a combined electric and gas utility serving the metropolitan New Jersey area. We employ over 13,000 men and women and generate combined revenues of $4.2 billion. Our total customer base is 3.2 million electric and gas customers. PSE&G net installed capacity is 10,032 megawatts and we have reached electric power peaks in excess of 8,700 megawatts this year. Our installed nuclear capacity is 2,842 megawatts with our utility plants valued at over $11 billion. PSE&G operates two PWR 1,100 MW units (Salem 1 & 2) and one 1,100 MW BWR (Hope Creek). The PWR units are shared ownership with Philadelphia Electric and PSE&G shares ownership of two Philadelphia Electric BWRs.

The three PSE&G operated units will require approximately 1.6 million pounds of U_3O_8 annually and about 400,000 SWU's per year. These are average yearly quantities through 1994. We have under contract sufficient U_3O_8 to cover our requirements through 1996. The U_3O_8 purchased during this period will be 60% Canadian and 40% US origin. All contracts have market related pricing mechanisms with some ceiling price protection making our uranium purchase strategy very sensitive to market price changes.

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The purpose of our testimony today is to provide a perspective of an individual utility on the pending legislation. The industry views on the merits of the pending legislation are presented by Mr. J. Kearney representing EEI and ANEC. As an individual nuclear utility, we wish to show the immediate impact of this type legislation on our rate payers. Any costs or savings obtained through this legislation would impact our customers. Our interests, on their behalf, are to keep our fuel costs as low as possible. While DOE and the uranium producers feel they must be competitive, each utility must also be competitive. We wish to show that our immediate costs, as a result of this legislation, will increase substantially and the projected future savings to our rate payers are not solidly guaranteed. The electric utility must produce assured supplies of power at a reasonable cost. This legislation does not help us to meet this requirement.

PSE&G actively supports free trade in uranium, the US DOE enrichment policies, domestic producers, and will support legislation which would equitability mitigate the current uranium industry problems. The issues of uranium industry viability, tailings clean up and DOE competitiveness are extremely important and poor solutions will be expensive and non productive. The legislation pending before the House, the "Uranium Revitalization, Tailings Reclamation and Enrichment Act of 1988" will place an immediate and retroactive increase in nuclear fuel costs to the PSE&G rate payers. The pending legislation requires utilities to pay $72/Kg of uranium loaded into reactors each year to a fund administered by DOE. For 1988 alone, PSE&G rate payers will pay $5.9 million for the uranium loaded in this year.

Through 1993, these costs will total an additional $37.4 million burden in nuclear fuel costs to PSE&G rate payers. These costs are a direct impact to our customers and do not reflect any increases in U_3O_8 costs which may result from the legislation.

The fund developed by the $72/Kg assessment on nuclear utilities will be used to allow the Department of Energy to make open market purchases and fund tailings reclamation at mill sites throughout the US. These tailings are estimated to be in excess of 140 million tons. Direct payment to mining companies who are no longer active producers could result in windfalls to these companies. A system of competitive bidding by uranium industry cleanup specialists should be developed to complete the tailings disposal project. The cost of this clean up is estimated to be $1 billion. PSE&G in the past has suggested that a pay out to mining companies based on new production of U_3O_8 would be acceptable. We cannot donate rate payer dollars to the large ex-mining companies who only wish to retire from the business after receiving cleanup funding.

The issue of mill tailings must be investigated further to provide accurate estimates of costs for reclamation. Past cost allocations made by the producers must be examined to determine if any portion of the price paid for U_3O_8 by the utilities was included for clean up. If so, these past payments should be deducted from payments for clean up. Additionally, those utilities that purchased no domestic U_3O_8 should receive some special consideration. The general levy of a flat fee on all utilities is not fair and equitable treatment. Payments into the fund should be based on how much domestic U_3O_8 was purchased in the past by the individual utilities.

Our support for free trade in uranium over possible SWU savings is mainly based on economic considerations. In our three reactors, increased U_3O_8 costs have a greater impact on fuel costs than SWU costs. If the price of U_3O_8 were to double, our front end fuel costs would increase 27%. With U_3O_8 trade restrictions or indiscriminate open market purchases by DOE, this price change is likely to occur. On the other hand if SWU prices increased to $150/SWU the effect is a 15% increase in front-end fuel costs. The U_3O_8 increase is also impacted due to inventory costs since we do not inventory enriched U_3O_8. A more detailed analyses is shown on Attachment I & II.

We cannot support a comprehensive bill which would cost our rate payers an additional $2.9 million per reload, and most likely increase U_3O_8 prices in exchange for elusive cost savings in enrichment sometime in the future. It does not appear to be a good prospect for our rate payers.

DOE must be restructured, and mill tailings must be cleaned up. We also agree that the uranium industry should be helped. We support a legislative solution of these issues in order to bring some stability into the nuclear market place. In our dealings with DOE and its predecessor agencies, we have gone from requirements, fixed commitments, adjustable fixed commitments and now back to essentially requirements contracting for enrichment services. We have witnessed at least one and possibly two boom/bust uranium cycles with predictions of no uranium available to an industry inventory of over 200,000,000 lbs. of U_3O_8.

The issue of the DOE unrecovered costs and debt to the Treasury has been debated many times. The utility industry feels there is no debt and we have paid our share of the costs. Figures of the amount of unrecovered costs range from zero to over $9 billion with several intermediate figures. The pending legislation does fix the cost to be recovered at $364,000,000. We consider this a positive aspect of the legislation.

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The nuclear utilities will purchase materials and services from those vendors who offer the best terms and conditions to meet the individual utility needs. The inflexibility of DOE contracting policy severely limits their ability to meet this requirement. The DOE charter to recover costs for services should be maintained but the flexibility to offer different terms, prices, and conditions should be available to DOE negotiators while still meeting full cost recovery requirements. We do feel that the enrichment enterprise must be restructured in order to remain competitive in the future.

The PSE&G position on domestic uranium industry viability remains unchanged. We will continue to purchase domestic uranium as long as it is available at reasonable costs. We have purchased some higher cost domestic uranium and balanced the increased cost against lower cost foreign purchases. At present, the imbalance is acceptable but major increases in domestic uranium costs will probably cause a change in this policy.

The enrichment enterprise must be made more flexible in order to be competitive and the debt issue must be resolved. This can be accomplished by restructuring the enterprise to allow more flexibility in dealing with customers.

PSE&G offers to assist in anyway to help provide long lasting equitable solutions to these issues.

ATTACHMENT I

U308/SWU Price Increases
% Changes in Front End F.C.C

A. Base Case: $ 15/lb. U308
$ 6/KgU UF6
$110/SWU
Constant Fab. Price

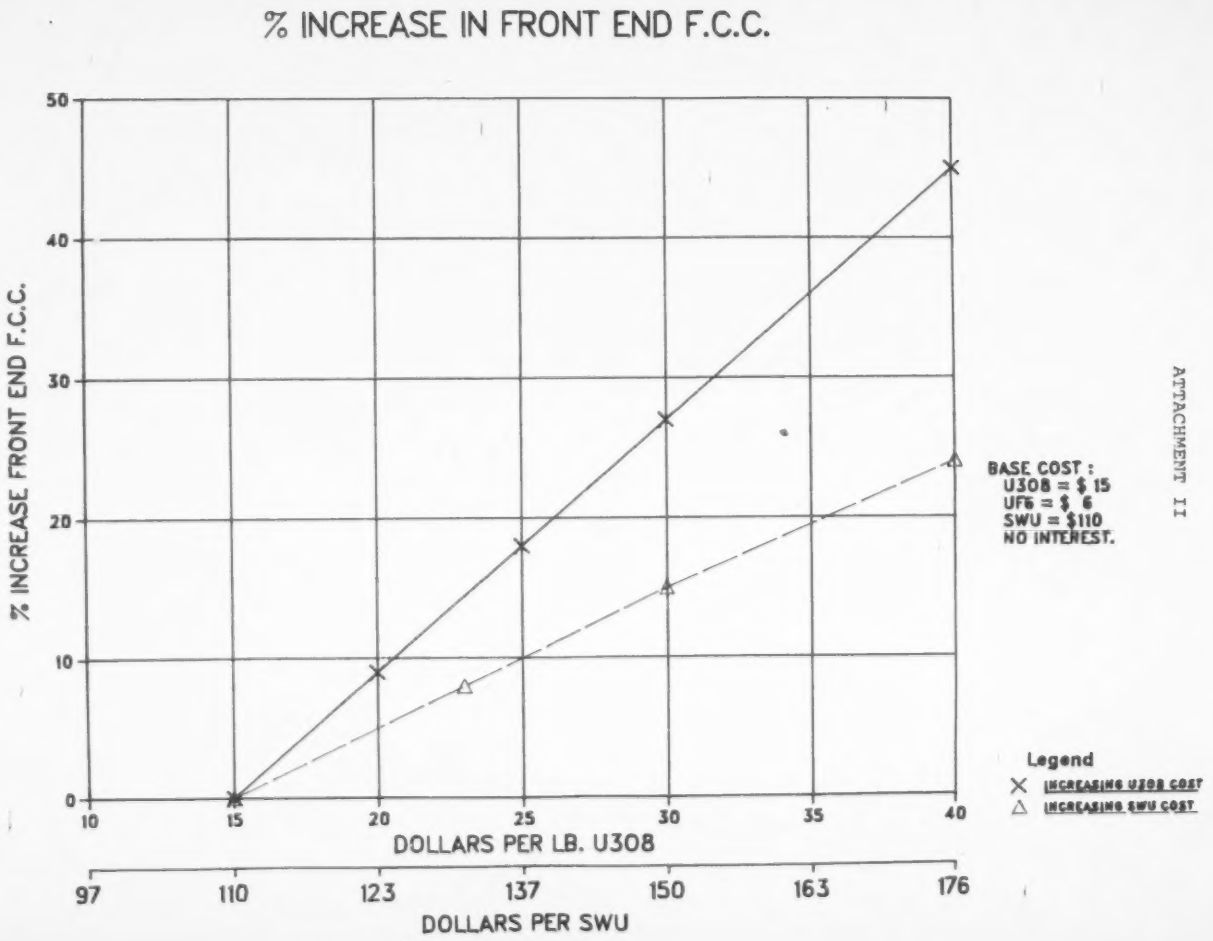
B. U308 Prices Increasing - Others Components Constant

$/lb. U308	Fuel Cycle Cost (¢/mBtu)	Front End Fuel Cycle Cost % Change from Base
$ 15	34.1	- 0
20	37.2	+ 9%
25	40.2	+18%
30	43.2	+27%
40	49.4	+45%

C. SWU Prices Increasing - Other Components Constant

$/SWU	Fuel Cycle Cost (¢/mBtu)	Front End Fuel Cycle Cost % Change from Base
$110	34.1	-
130	36.7	8%
150	39.3	15%
175	42.5	24%
200	45.7	34%

ATTACHMENT II



Mrs. LLOYD. Thank you very much, Mr. Gennone. I want to apologize at this time. When I opened the hearings today, Mr. Morrison was not here and I didn't look to the left and I want to apologize because I didn't realize that Mr. Fawell, one of the hardest working and most conscientious Members of this Committee had come into the hearing and unfortunately, he didn't get to ask questions of Mr. Garrish, so I'm going to defer to Mr. Fawell at this time with an apology.

Mr. FAWELL. No apology is necessary. I move very quietly in and out but I think, Madam Chairman, that questions that you had proposed before were much along the line that I had in mind. The only questions I had here were basic ones which probably are more for my edification than Madam Chairman but the—as I reviewed the notes in reference to the testimony, I was struck with that basic question of why this new corporation. Why couldn't DOE basically do the same thing without the corporate setup and there were answers of course given to that question in regard to the previous witness.

The previous witness also indicated that this was turning things over to private enterprise field and it doesn't seem to me that this corporation is what you would call a private enterprise.

Basically the stock as I understand it is wholely owned by the federal government. Is that correct? It's true it seems that you're kind of getting more flexibility—moving away from consistent, Congressional communications for lack of a better word.

I would be interested in your opinion in that regard but also it does seem to me that there's subsidy involved here although I notes that bonds are being sold theoretically to be sold. I'm not sure to whom with no Government backing on those bonds but the creation of this fund—isn't there a subsidy—by the creation of this $1.7 billion fund—isn't there a subsidy to the uranium mill site owners?

Mr. GENNONE. Are you asking me that question?

Mr. FAWELL. Yes, I am.

Mr. GENNONE. Yes, it is. We looked at it as a direct subsidy. We find I guess out of the $72 kg fund, I think, $54 of that will be used by the DOE to make open market purchases of domestic uranium for whatever purposes—their overfeeding purposes. I suspect this will also lead to increased prices as far as the domestic utilities are concerned. I think that the wording in the bills has been one of—the original wording said that DOE would buy based on competitive bidding and that these bids should be near the current market prices.

Those words are no longer in the legislation. I think today's spot market by most of the indicators is around $14. I suspect that most of the producers when they do in fact bid are not going to bid $14. If the purpose of this levy and the purpose of these things is to revitalize the industry and provide a more secure supply of domestic uranium to U.S. utilities I suspect that the U.S. utilities aren't going to see this uranium because the government would probably be buying it at a much higher price than we can buy it out of Canada.

Mr. FAWELL. Thank you. That's the only question I had.

Mrs. LLOYD. Thank you very much, Mr. Fawell. Mr. Gennone, on page 2 of your testimony, you note that the existing legislation proposed to the corporation will increase immediate costs to rate payers that you serve. Of course, this is one of the areas of concern that we're looking at but now others say that there will be certainly savings associated with the reorganization. Do you disagree that reorganization could provide substantial savings to the rate payers?

Mr. GENNONE. We don't disagree that it could provide savings. We don't see the savings. We have queried DOE on what they expected the savings to be and we have not gotten responses. We're looking at today's costs and today's competitive market. If the SWU prices come down due to this legislation, it goes on to our customers. We'd be glad to see it but at this point, we don't see that DOE is going to substantially lower their prices as soon as they become a government corporation or restructured.

Mrs. LLOYD. Now, on page 4, you look at the suggestion that DOE be given flexibility in dealing with its customers. Now, right now, they are prohibited against discrimination. Are you saying that they should have different prices for different customers?

Mr. GENNONE. I think prices—different prices for different customers would be acceptable. We do it on uranium. In uranium contracting, you might give up a little bit of your cost edge for added flexibility.

Mrs. LLOYD. Now, how would you decide who got the lower price? How would you determine who would be offered lower SWU?

Mr. GENNONE. It depends on what the individual utility wants. If I want greater flexibility and greater flexibility in quantities or shorter notice to DOE or my units aren't running too well and maybe I need it and maybe I don't - - have the ability to change my order right up to the last minute. I might be able to—willing to pay a higher SWU price for that. If you're a single utility, a single utility with a single small reactor where you know your requirements right down to the letter, you don't need the flexibility and maybe you can place your order a year in advance or 180 day notice and pay a lesser price.

We think that flexibility in our ordering, flexibility in slipping our schedules back and forth after we've given notice, we'd be willing to pay something for that. I don't think that if everybody's terms and conditions were the same then prices obviously have to be the same.

Mrs. LLOYD. You touched on mill tailings in your testimony. You stated you felt like this would be a windfall for the mill owners. Do you think it's fair to tax utilities and ultimately the ratepayers to pay for the mill tailings cleanup?

Mr. GENNONE. I think we might have some responsibility for mill tailings, but I think, first, we'd have to look much more closely at how many tailings are there. I think there are estimates that say they've got 33 million tons of tailings. I don't know how accurate that number is. We're throwing around a number like $450 a ton. I think the new numbers at Exxon are showing that the cleanup costs are substantially less than that. It's probably on the order of $1 a ton.

This fund, once the money is collected, if it's not used for tailings cleanup, anything that's left over goes for uranium purchases and

it results in the further subsidy there. I think we'd be competing against our own dollars when we came to buying uranium.

Mrs. LLOYD. Does this mean that—you stated that you can't support any of the existing bills which tie reorganization to programs which assess about $3 million per reload of additional costs to the ratepayers. Does this mean that you will support a lower cost to the ratepayers or do you want the Congress to restructure the business without tying it to uranium subsidies or mill tailing cleanup?

Mr. GENNONE. That would be our preference. We think the issues are separate and we think they should be treated separately.

Mrs. LLOYD. Thank you very much. Well, thank you, Mr. Gennone. As I say, we're trying to move the hearing so that we can finish before we start on all of the recorded votes that will be taken at one time, so we will ask you additional questions for the record. Thank you.

In order to move the hearings, I will ask if the three remaining witnesses will come to the witness table as a panel so that we can receive their testimony and then ask questions of them all.

Mr. Kearney is Senior Vice President of Edison Electric Institute. Mr. William Badger is Chairman of the Committee on Electricity at the National Association of Regulatory Utility Commissioners. Mr. Charles Montange is Counsel of the National Taxpayer's Union. Welcome, gentlemen, and, Mr. Kearney, we'll start with you and welcome.

STATEMENT OF JOHN J. KEARNEY, SENIOR VICE PRESIDENT, EDISON ELECTRIC INSTITUTE; WILLIAM A. BADGER, CHAIRMAN, COMMITTEE ON ELECTRICITY, NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS; AND, CHARLES MONTANGE, COUNSEL, NATIONAL TAXPAYER'S UNION.

Mr. KEARNEY. Thank you very much, Madam Chairman. In accordance with your request, I will summarize my summary.

Mrs. LLOYD. Well, we're not rushing you that much. We want you here and we look forward to your testimony.

Mr. KEARNEY. Madam Chairman, I am John Kearney, Senior Vice President of the Edison Electric Institute, and I am here today to speak on behalf of EEI and the American Nuclear Energy Council. I would appreciate the Subcommittee taking my complete testimony and putting it in the record.

Mrs. LLOYD. Without objection, all of your testimonies will be in the record, but you may proceed as you wish.

Mr. KEARNEY. Thank you. Mr. Garrish has indicated the importance of nuclear power to our nation and to our economy, so I will not dwell on that. But we believe that this legislation will benefit the country as a whole by retaining enrichment customers for the domestic enterprise, retaining skilled labor jobs in the United States, assuring that the AVLIS enrichment technology is brought to fruition, and helping to contain the cost of electric production.

As Mr. Garrish has pointed out and observed and you have, too, Madam Chairman, the DOE enrichment enterprise, our only domestic source of enrichment, faces stiff competition from overseas suppliers that have been very successful in taking business away from the DOE. As you know, at one time we had 100 percent of the

foreign business and I believe now it is somewhere in the range of five to ten percent.

The continuing loss of domestic jobs and exporting business is both unnecessary and unfortunate, but is likely to continue in the near future as DOE customers seek more competitive foreign enrichment services. In our judgment, the only effective way to reverse this erosion of the customer base and to achieve benefits that are in our testimony is by restructuring the uranium enrichment enterprise to achieve a more reliable and customer-oriented operation.

Madam Chairman, you have referred to the Tri- Committee Business Advisory Panel and their urgings about seeking different ways to provide enrichment services. So I will not enter into that discussion, but I would like to point out one additional thing that the Tri-Committee Panel did, and that was to recognize that one of the most important decisions faced by the enrichment program involves the selection of a new more cost effective enrichment capacity.

With this urging and that of the Congress, the DOE has selected AVLIS as the advanced enrichment technology that DOE would use to eventually replace gaseous diffusion. AVLIS is being considered and being developed and it may be able to achieve enrichment costs of less than $40 per SWU and this could certainly serve to keep nuclear fuel costs low as enrichment constitutes about 40 percent of these costs.

Now, while the Congress is considering the benefits of restructuring, the uranium enrichment enterprise, which we strongly urge you to do, it should put to rest the very complex issue of the alleged prior unrecovered government costs. Confusion on this issue has been increased by the General Accounting Office by failing to perform an allocation of costs among the three basic functions served by the enterprise. Commercial sales, defense transfers, and supporting government, domestic, and foreign policy issues. The GAO reports on this subject are misleading and provide the mistaken impression that commercial service customers have not paid fully for enrichment services rendered.

This is completely false. A correct review of the program would show that Title III of these bills is a very fair way to proceed. It is not a bailout of the electric utility industry nor a subsidy by the taxpayers. The simple truth is that DOE's commercial customers have paid their full share of past costs, and as Mr. Garrish has pointed out, there is no debt. They have paid for services rendered on the specific contractual arrangements.

In any event, arguments about a past debt are meaningless. You simply cannot burden any business with a debt larger than the marketplace will support. To do so would quickly lead to the loss of more enrichment customers and ultimately to the collapse of the enrichment enterprise itself.

While much time has been spent analyzing the history of the enrichment program and the manner in which the program has been run over the past two decades, that history is less important today than the need to restructure the enterprise so that it can be a winner in the future.

Advanced technologies such as AVLIS will be possible in our judgment under the new enterprise and that unless the changes specified in the legislation before you now are carried out expeditiously, the enterprise will continue to suffer a loss of business and the trends of the past decade will reach their ultimate conclusion, namely that commercial enrichment will be increasingly performed by foreign entities, the taxpayers will be burdened with expensive defense-related enrichment performed by an enterprise that has few commercial customers to share the operating costs, and future revenues to the Treasury from the enrichment enterprise will be reduced significantly.

The choice to avoid these conditions is now in the hands of the Congress and consequently the electric utility industry recommends that the DOE uranium enrichment enterprise should be permitted to compete effectively in the international market and expand in the future through the application of advanced technologies such as AVLIS.

Secondly, that the domestic enrichment enterprise should be restructured as a government corporation and operated with a board of business executives possessing substantial competitive business skills.

Thirdly, that the nuclear fuels supply problem should be addressed through a comprehensive legislation in a fair and balanced manner. I thank you for your time and attention.

[The prepared statement of John J. Kearney follows:]

Testimony by
John J. Kearney
Senior Vice President
Edison Electric Institute
on Behalf of the
Edison Electric Institute
and the
American Nuclear Energy Council

to the

Subcommittee on Energy Research and Development
Committee on Science, Space, and Technology
U.S. House of Representatives

on

Uranium Enrichment

October 6, 1988

Madam Chairman and Subcommittee Members:

My name is John J. Kearney. I am Senior Vice President of Edison Electric Institute. I am here today to speak to this subcommittee on behalf of EEI and the American Nuclear Energy Council (ANEC). EEI is the national association of investor-owned electric companies. Its members serve approximately 73 percent of all ultimate electricity customers in the nation. ANEC represents over 100 domestic and international organizations having an interest in nuclear energy. My statement today concerns the supply of fuel for the nation's nuclear reactors.

Nuclear energy provides nearly 20 percent of the electricity generated in the U.S. One of the advantages of nuclear energy as a source for the safe and reliable generation of electricity is the low cost of nuclear fuel. This advantage is maintained through a reliable and low cost supplier base for the supply of uranium ore, conversion to uranium hexafluoride, enrichment services, and fuel fabrication. The two elements of concern to us at this time are domestic uranium supply and uranium enrichment.

Legislation pending before the House, the "Uranium Revitalization, Tailings Reclamation and Enrichment Act of 1988" (H.R. 4489 or H.R. 4975), as a comprehensive package, will have a profound impact on the domestic nuclear fuel supply industry. This legislation contains provisions to resolve the conflicts and challenges the industry faces. In our view, H.R. 4975 is the version most consistent with the Canada-U.S. Free Trade Agreement.

Electric utilities view this legislation as serving four important interests: (1) retaining U.S. and foreign enrichment customers for domestic enrichment; (2) retaining skilled labor jobs in the United States; (3) assuring that the AVLIS advanced enrichment technology is brought to fruition; and (4) containing the cost of producing electricity with nuclear energy.

This latter point is essential to assure reasonable electricity costs for the commercial businesses in our nation, particularly in this era of fierce international competition. Clearly, the United States and all its citizens are significantly affected by this legislation.

Beyond the immediate effects this legislation will engender, it will help assure that the United States reaps the full benefit of its enrichment enterprise. It will provide the most effective way of realizing the maximum return on the investment in our current battery of enrichment facilities and equipment and will help assure that our efforts in enrichment technologies such as the advanced Atomic Vapor Laser Isotope Separation (AVLIS) process will not be wasted. This legislation will help keep future nuclear fuels costs as low as possible. It is therefore important to realize that this legislation, as currently written, provides a long-term solution and not simply a quick-fix, thereby contributing to the security of the future as well as the present.

We must find a fair and effective solution to problems concerning uranium enrichment in the United States. Domestic nuclear utilities are the major commercial uranium enrichment customers of the Department of Energy (DOE). Each year the more than 100 utility reactors in the U.S. will consume approximately 10 million Separative Work Units (SWUs) of uranium enrichment services with a value of about $1 billion. The bills before the House provide a reasonable step toward breathing vitality into our withering uranium enrichment enterprise.

Electric utilities believe very strongly that the uranium enrichment provisions of this legislation must command the serious attention they deserve. There should be no impetus to address the problems of the domestic uranium mining and milling industry without dealing with the challenges facing the domestic enrichment enterprise. Our electricity customers--individuals and businesses all over the country--will be paying for the assistance proposed for the uranium industry through what is effectively a tax, and we feel that this is fair only if this assistance is part of a package that provides offsetting savings.

On average, for all U.S. electricity consumers, restructuring the enrichment enterprise will do this. Not only do our customers benefit in the long-term through the lower fuel costs

which could result from a restructured, competitive domestic enrichment enterprise, but the overall market stability to be gained by solving all these fuel supply problems can lead to lower prices through better predictability for inventory control and other facets of fuel management. While the customers of some utilities may realize some increased costs if Titles I & II of this legislation becomes law, we believe that the overall combined outcome of this legislation is approximately cost neutral for electricity customers nationwide.

Importantly, in these days of an increasingly stretched tax dollar, American taxpayers are not burdened under these bills because taxpayer dollars do not fund any of the proposals. In fact, the government's $450 million contribution to the Uranium Revitalization Fund proposed in H.R. 4975 and the government's $300 million contribution to the Uranium Mill Tailings Fund proposed in H.R. 4489 are paid by the U.S. Enrichment Corporation of Title III. As I just stated, those costs to all U.S. electricity consumers are generally balanced by the benefits of going forward with a restructured uranium enrichment enterprise.

The DOE uranium enrichment enterprise, our only domestic source for enrichment, faces stiff competition from overseas suppliers. The loss of domestic jobs and export business is both unnecessary and unfortunate but is likely to continue as the DOE's customers are forced to seek competitive foreign enrichment services. The only effective way to stop this erosion of the customer base is by restructuring the uranium enrichment enterprise to achieve a more reliable and customer-responsive operation. Both of these bills, H.R. 4489 and H.R. 4975, provide for a government enrichment corporation that will establish a clear direction and enhance the stability of the domestic enrichment enterprise, thereby protecting domestic jobs and making our enrichment export business more secure. Furthermore, this legislation provides authority for the United States Enrichment Corporation to make dividend payments to the U.S. Treasury.

Restructuring the Federal Enrichment Enterprise

The restructuring of the Federal enrichment enterprise is a keystone of the legislation now before this subcommittee. It is vital to the success of any actions taken to address the problems facing nuclear fuel supply. This is a fact that has long been recognized by many parties. For example, in 1984, this subcommittee's chairman, Congresswoman Lloyd, companion House subcommittee Chairman Ottinger, and full committee Chairmen Fuqua and Udall, established the Tri-Committee Business Advisory Panel to review the DOE uranium enrichment enterprise.

Several of that panel's recommendations have been achieved by the DOE. However, the primary recommendation calling for the restructuring of the enterprise has not been accomplished, and Congressional action is required to do so.

The chief finding of the panel was:

> The current management of the Office of Uranium Enrichment has made progress in going from a technology-driven to a market-driven mode of operation. However, there is an urgent need for further improvement, and DOE should accelerate the transition.

As a result of this finding, the Panel recommended that:

> Congress and the Secretary of Energy should take steps to establish a private business management structure for the enrichment enterprise. Alternative institutional structures under government ownership should be examined. The proper structure would further the business objective of the enterprise and be compatible with an approach to privatization of enrichment services.

Some have voiced the opinion that the enrichment enterprise, as currently structured, can continue doing business. Electric utilities disagree with this point of view. We believe the contrast between the two options of continuing "business-as-usual" or restructuring the enrichment enterprise now is quite dramatic.

Following the "business-as-usual" path will result in the continued loss of market share, loss of more skilled labor jobs, loss of more export business, and loss of a strong future position for the control of this sensitive technology from a non-proliferation standpoint. It will also result in a high cost burden for all taxpayers in maintaining the production of defense-related materials without the economy that commercial production would bring.

The current enrichment enterprise structure may have been adequate when the DOE held a monopoly on enrichment, but under this organization and financial structure, in today's competitive international marketplace, the domestic enterprise cannot survive. A new organizational structure is essential to the enrichment enterprise's ability to provide for the long-term enrichment needs of its customers. The legislation before you provides an important first step, and we urge you and Congress as a whole to take that step.

Advanced Enrichment Technologies

The Tri-Committee Panel stated that one of the most important decisions facing the management of the DOE enrichment program involves the selection and acquisition of new, more cost-efficient enrichment capacity. As such, a few comments on advanced enrichment technologies are appropriate.

The United States has led the world in the development of commercial nuclear power, including uranium enrichment. In 1969, the United States began meeting the expanding enriched uranium needs of industry with the gaseous diffusion plants, which are still the basic workhorses of U.S. enrichment capability. The two operating gaseous diffusion plants at Portsmouth, Ohio and Paducah, Kentucky have sufficient capacity to meet U.S. production requirements through the end of the century. However, because they are very energy intensive, their ability to remain competitive is in part subject to their cost of electricity.

New enrichment technologies are less energy intensive and may offer additional advantages. Two major technologies have been considered by the DOE: gas centrifuge and atomic vapor laser isotope operation (AVLIS). In May 1985, AVLIS was selected over the Advanced Gas Centrifuge process as the advanced enrichment technology that the DOE would eventually use to replace gaseous diffusion, and it is being developed at Lawrence Livermore National Laboratories. It should be noted that the AVLIS process also is being actively pursued by France and Japan. Since AVLIS may be able to offer enrichment services at costs less than $40 per SWU, this could be a significant factor in keeping future nuclear fuel costs low, as enrichment constitutes about 40% of these costs.

Electric utilities recommend that Congress continue to allocate a portion of the DOE's uranium enrichment revenues to proceed rapidly with the next phase of AVLIS development, namely the completion of a pilot demonstration. These efforts must be carefully aimed at providing a more realistic basis for determining AVLIS's commercial applicability and establishing a greater confidence in the projected cost for SWU production. To the extent that the AVLIS process appears to offer reasonable expectations for lower costs, electric utilities support moving forward with this next step. Congress should continue with its funding so long as AVLIS continues to offer the expectations of more cost-efficient enrichment capacity. The decision to deploy the AVLIS technology should be based on economic grounds characteristic of any well managed business.

We hope that Congress recognizes the importance of this technology and the role that H.R. 4489 and 4975 play in its future. Without the measures specified in the pending legislation, the domestic enrichment program will decline and

AVLIS will never reach commercial application in the United States. Unless the enrichment enterprise is restructured, the funds and effort expended on AVLIS research will have been wasted and the development of this technology will be left to other countries. The consequences of this are obvious and we strongly encourage Congress to take the steps necessary to avoid them.

Payments to the Treasury

The DOE's customers have expressed a number of concerns when evaluating the Department's effectiveness as a supplier of enrichment services. One of the most important concerns involves the very complex issue of "prior unrecovered government costs," that some groups have argued should be considered as a debt of the enrichment enterprise. The DOE's customers know that the extent to which this alleged debt is included in the DOE's prices, its competitiveness is further eroded and its survivability as a future supplier becomes more questionable.

While the arguments on this are complex, the simple truth is that the DOE's commercial customers have paid their full share of all past costs and are not legally responsible for any debt.

Although the DOE, the Office of Management and Budget (OMB), and many concerned members of Congress have agreed that the equity-based approach provided in H.R. 4489 and H.R. 4975 clarifies and appropriately resolves the "prior unrecovered government costs" issue, it is important to understand the origin of the confusing and widely publicized allegations of the existence of a massive debt on the enrichment accounts. The origin appears to be the result of a non-segregated analysis by the General Accounting Office (GAO) that lumps government domestic and foreign policy actions with defense transfers and commercial sales while ignoring the year-by-year direction of Congress for the management of the enrichment enterprise.

Congress provided specific guidance, year-after-year, for the program to proceed on the basis that revenues are to be used to offset outlays, and that is the way the program has been run by this and previous Administrations. While the GAO--in contradiction with its previous analyses--and others have attempted to describe the history of the enterprise using their own unique ground rules and accounting terms, they have offered more confusion than clarity.

By failing to perform an allocation of costs among the three basic functions served by the enterprise, the GAO reports are misleading and provide the mistaken impression that commercial service customers have not paid fully for enrichment services rendered. This is completely false. A correct review

of the program would show that Title III of these bills is a very

fair way to proceed. It is not a "bail-out" for electric utilities nor a subsidy by taxpayers.

In any event, arguments about a past "debt" are meaningless. You simply cannot burden any business with a debt larger than the marketplace will support. To do so would quickly lead to the loss of more enrichment customers and ultimately to the collapse of the enrichment enterprise itself. Should this happen, export business, skilled jobs, and our ability to influence the flow of nuclear materials overseas would be lost forever; the treasury will receive no payments from the enrichment enterprise; and the effort expended in pursuit of the promising AVLIS enrichment technology will have been wasted.

It is clear to us that the only "unrecovered costs" are those represented by the government's equity in the enterprise. The return on this equity will be whatever the business can earn with well-managed costs and prices determined in the marketplace.

Future Revitalization

The market conditions which the DOE faces surely have not been exaggerated. Last April, a number of the DOE's utility customers officially provided notification of termination for the years 1996, 1997 and 1998. This illustrates that present contract holders are very much concerned about the ability of the DOE to serve their individual needs and to offer competitive prices.

It has been stated that all of DOE's customers cannot cancel due to the lack of excess world-wide capacity to absorb the transferred demand. Even if this is true for the period 1996 to 1998, the next wave of cancellations will be for commitments ten years out. Additional lower cost enrichment capacity to absorb future DOE losses easily could be on line in time to meet this demand. One analysis has shown that lower cost production of enrichment services may be achieved through the construction of a completely new and independent enrichment plant within the United States using European technology.

While much time has been spent analyzing the history of the enrichment program and the manner in which the program has been run over the past two decades, that history is less important than the need to restructure the enterprise so that it can be a winner in the future. The time has come to look forward rather than backward and to set the stage for the domestic enterprise to remain a potent force in the world market. By exploiting advanced technologies such as AVLIS, the enterprise has the capability of growing instead of shrinking and paying huge sums to the U.S. Treasury in the form of dividends. Clearly, the enrichment enterprise does not need protection from foreign competition. Rather, the need is for removal of the constraints

which hobble its competitive ability.

Without the changes specified in the legislation before you now, the enterprise will continue to suffer loss of business and the trends of the past decade will reach their ultimate conclusion: commercial enrichment will be increasingly performed by foreign entities; the taxpayers will be burdened with expensive defense-related enrichment performed by an enterprise that has few commercial customers to share its operating costs; and further revenues to the Treasury from the enrichment enterprise will be reduced significantly. The choice to avoid these conditions is now in the hands of Congress.

SUMMARY

Electric utilities have an obligation to their customers to provide a reliable supply of electricity at a reasonable price. One of the advantages of generating of electricity by nuclear energy is the low cost of fuel, and great effort must be continued to retain that advantage. Uranium supply and enrichment are approximately 80 percent of nuclear fuel cost, and domestic utilities must have dependable and predictable suppliers of these services in order to keep their plants operating. American utilities will purchase tens of billions of dollars worth of uranium and enrichment services between now and the year 2000. We must strive to assure the greatest possible benefit to our customers for every dollar spent.

In assuring dependable supplies at reasonable costs, the electric utility industry recommends the following:

1. At a minimum, the DOE uranium enrichment enterprise should be permitted to compete effectively in the international market and expand in the future through the application of advanced technologies such as AVLIS.

2. The domestic enrichment enterprise should be restructured as a government corporation and operated with a board of business executives possessing substantial competitive business skills.

3. Nuclear fuel supply problems should be addressed through comprehensive legislation in a fair and balanced manner this year.

Mrs. LLOYD. Thank you, Mr. Kearney. Mr. Badger, proceed.

STATEMENT OF WILLIAM BADGER, CHAIR, COMMITTEE ON ELECTRICITY, NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS.

Mr. BADGER. Thank you, Madam Chairman and Members of the Subcommittee. My name is William Badger. I'm a Member of the Maryland Public Service Commission and I also serve as Chairman of the Committee on Electricity for the National Association of Regulatory Utility Commissioners commonly referred to as NARUC and on whose behalf I appear today.

As you're aware, NARUC is a quasi governmental non- profit organization and is the national representative of the 50 state commissions responsible for regulation of utilities and carriers.

We very much appreciate your invitation to express our views on this important legislation which is under consideration before the House. Several of the issues that are contained in this legislative proposal were addressed by NARUC as part of its 1987 summer meetings and specifically by its Committee on Electricity and its Subcommittee on Nuclear Issues and this effort eventually resulted in the adoption of a formal resolution, a copy of which is attached in my following statement and was approved by the NARUC Executive Committee on July 22, 1987.

Very briefly, this resolution recommended that (1) Congress favorably consider legislative proposals that would establish a government corporation that would operate similar to other government functions where the relationship with the public is one of an entrepreneur rather than a sovereign and where users rather than taxpayers will be supporting the costs of such services, (2), that Congress prohibit the Office of Management and Budget and the General Accounting Office from implementing retroactive recovery payments in order that enrichment services might be priced on a basis of participating in a competitive market.

Finally, that trade policies with respect to the supply of enrichment services be continued. With your permission, let me first address the organizational structure. As you know, the uranium enrichment facilities were first constructed by the government in World War II for the development of weapons for our national defense.

It was not until the 1960s that nuclear power was used for commercial purposes. The pricing system set forth by the Atomic Energy Commission and later by the Department of Energy required the payment of the fee to recover the cost associated with these services.

It would appear that Congress intended this program to be self-supporting since the appropriations that were established were generally at a level approximating expected revenues.

What has occurred with this enrichment enterprise that while once DOE commanded 100 percent of the world market for its services, this share in just 13 years has been reduced by one half with the unhappy circumstance of excess production capacity and a shortage of revenues to finance technology improvements.

We learned recently that the Soviet Union now controls 10 percent of the European market compared to 8 percent held by our government. I found in 13 years of regulation that hindsight is a wonderful attribute and perhaps the international competition would never have occurred were it not for our government's decision to discontinue foreign orders for uranium enrichment.

DOE's ability to compete has also been hindered by the enormous demand charge contract commitment to the Tennessee Valley Authority in the range of $4 billion. Then there was the $3 billion spent on research and development and construction of a gas centrifuge enrichment plant that was later terminated.

However, in fairness to my good friend Ted Garrish, those years were very difficult years in the exercise of our U.S. energy policy and probably were appropriate at the time. We now have a situation in which foreign markets are operating more efficiently with lower price contracts.

It's our understanding that several utilities have notified DOE that they do not intend to purchase enrichment services in the late 1990s when commitments can be cancelled without penalty. If this type of departure continues, it would appear that the only result can be a higher cost for SWUs and a larger loss of market share. NARUC believes that the establishment of a government corporation may permit it to compete in the realities of a competitive marketplace and hopefully this restructuring would permit our nation to reestablish its position as a dominant player in the international marketplace.

The provision of enrichment services in an environment driven by market forces has been further complicated by the issue of prior unrecovered government cost which has been mentioned very much this morning.

NARUC is unable to identify any provision of the Atomic Energy Act requiring payments by commercial customers to the U.S. Treasury. These facilities as I mentioned earlier, were constructed for national defense purposes and notwithstanding commercial customers for the past 20 years were charged a fee which included a depreciation element to provide for the recovery of capital.

Finally, as has been noted by the previous witness, there has never been an allocation of cost between the defense and commercial sector. For this reason, we believe that the principal of retroactive recovery payments are inappropriate and should be precluded by Congress.

Clearly, subjecting a new government corporation to retroactive debt can only result in higher prices for enrichment services and provide international markets with even a greater advantage than they have today.

As I noted in my written statement, we regret that we're unable to provide you with any assistance with respect to the provision of the proposed legislation that would establish the $1.75 billion uranium revitalization fund. The reason for this is that our 1987 review preceded the current legislative proposal which would include a cost sharing arrangement for tailings reclamation and include an initial debt element of $364,000,000 for repayment provisions over a 20-year period.

NARUC will be meeting at the end of this month and in an effort to assist the Committee in your deliberations, the Committee on Electricity intends to address this issue and will hopefully submit its findings and recommendations for your future consideration.

In summary, we recognize that the issue of uranium enrichment and supply is a complex matter but we encourage you to extend favorable consideration to the formation of a government corporation should you conclude that such an organizational structure would be cost effective and permit it to compete in a responsible and responsive manner in the international marketplace.

Finally, we would respectfully suggest that this desirable objective may not be achievable unless Congress prohibits OMB and GAO from implementing retroactive recovery payments. Thank you very much.

[The prepared statement of William A. Badger follows:]

UNITED STATES HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY

TESTIMONY OF THE

NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS
1102 INTERSTATE COMMERCE COMMISSION BUILDING
P. O. BOX 684, WASHINGTON, D. C. 20044
PRESENTED BY
WILLIAM A. BADGER, COMMISSIONER
MARYLAND PUBLIC SERVICE COMMISSION

ON

URANIUM ENRICHMENT AND SUPPLY

OCTOBER 6, 1988

Madam Chairman and distinguished members of the Subcommittee:

My name is William A. Badger, and I am a member of the Maryland Public Service Commission and Chairman of the Committee on Electricity for the National Association of Regulatory Utility Commissioners, commonly referred to as the NARUC, on whose behalf I appear today.

The NARUC is a quasi-governmental, nonprofit organization founded in 1889. Within our membership are the governmental agencies of the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands who are engaged in the regulation of utilities and carriers. Our chief objective is to serve the public interest by seeking to improve the quality and effectiveness of government regulation in America.

We deeply appreciate this opportunity to express our views on the legislation under consideration before the House, the "Uranium Revitalization, Tailings Reclamation and Enrichment Act of 1988" (H.R. 4489 or H.R. 4975). As you are aware, State Public Service Commissions, (PSC's) have general responsibility for discharging a regulatory process that determines rates charged by electric utilities. Since domestic nuclear utilities are the largest commercial uranium enrichment customers, we are, therefore, uniquely situated to offer some insight on this legislative package and its potential impact on electric ratepayers.

From the outset, let me emphasize that my appearance today is to provide the Subcommittee with the position taken by the NARUC at its 1987 summer meetings with respect to uranium enrichment legislative proposals that were being considered at that time. The NARUC review was prompted by concerns expressed by many state regulators on the significant issues of unrecovered government costs, continuation of free trade policies and the establishment of a government corporation to administer the enrichment program. This effort undertaken by the NARUC Committee on Electricity and its Subcommittee on Nuclear Issues culminated in the adoption of the attached formal resolution by NARUC's Executive Committee on July 22, 1987. While a more complete discussion of the NARUC position is contained in the resolution, the NARUC specifically recommended that, subject to a determination by Congress, that unsubsidized savings to electric utility ratepayers were likely to occur:

a. The Congress of the United States favorably consider legislative proposals that would establish a government corporation that would operate similar to other government functions where the relationship with the public is one of an entrepeneur rather than a sovereign, and where users, rather than the general taxpayers, will be supporting the cost of such services.

b. The Congress of the United States prohibit the Office of Management and Budget (OMB), and the General Accounting Office (GAO) from implementing retroactive recovery payments so as to permit the pricing of enrichment services on a basis of participation in a competitive market.

c. The free trade policies with respect to the supply of enrichment services be continued.

Organizational Structure

Uranium enrichment facilities were first constructed by the federal government during World War II in conjunction with the development of nuclear weapons for our national defense. It was not until the 1960's that nuclear power was used for commercial purposes. At that time, the Atomic Energy Act (AEA) specified that nuclear power plants could lease fuel from the government (rather than purchasing it) after it had been enriched. Congress subsequently amended the AEA so that private companies could own uranium, but the federal government would continue to enrich it.

This "Privitazation Act" of 1964 set forth the manner in which the uranium enrichment enterprise would operate. The Atomic Energy Commission (AEC), and later the Department of Energy (DOE), provided the service of enriching uranium for the Defense Department and commercial nuclear power plants. Today, DOE's principal commercial uranium enrichment customer is the domestic nuclear power industry with its 100 reactors that utilize approximately $1.0 billion in enrichment services per year.

The pricing system set forth by the AEC and currently used by DOE for the enrichment enterprise requires utilities to pay the government a toll fee to recover costs of enriching the uranium. Thus, it would appear that Congress intended that the enrichment program be self-supporting considering that appropriations were established at a level approximating expected program revenues. Prior to the mid-1970's, DOE provided 100 percent of the world demand for uranium enrichment services. In a matter of 13 years, it appears that the federal government has surrendered approximatly 50 percent of the uranium enrichment program market place and is now experiencing excess production capacity as well as a shortage of revenues required to finance technology improvements. In this regard, it is interesting to note that DOE's European market share has declined from 100 to eight percent and now compares unfavorably with the Soviet Union which now controls over 10 percent of this particular market.

With the great advantage of hindsight, we can all speculate as to the wisdom of the 1974 decision to discontinue foreign orders for uranium enrichment, thus prompting the introduction of international competition; the contractual commitments with the

Tennessee Valley Authority which required the payment of $4.0 billion in demand charges; and the $3.0 billion spent on research, development and construction of a gas centrifuge enrichment plant which was subsequently terminated in favor of the laser enrichment process. These were difficult years in the exercise of United States energy policy and the decisions made were probably appropriate for their time.

Under circumstances where foreign markets operate with more modern and efficient facilities and offer better term and lower priced contracts than the federal government, it should come as absolutely no surprise that several utilities have notified DOE that they do not plan to purchase enrichment services from DOE in the late 1990's when such annual commitments can be cancelled without penalty. If this process continues, and given the manner in which the government appropriation process operates, it is likely that the cost of separative work units (SWU's) will continue to rise and produce an even greater DOE loss of market share.

The NARUC respectfully submits that it is timely for Congress to consider restructuring of the DOE uranium enrichment enterprise in order that it may compete in the realities of a competitive market place. It seems clear that the provision of uranium enrichment services represents a business enterprise with characteristics that are distinguishable from traditional government functions.

H.R. 4489 and H.R. 4975 addressses these issues. These bills would establish a government corporation, the United States Enrichment Corporation (USEC). The USEC would operate under the guidance of an advisory board composed of individuals with substantial business skills and be managed by a presidential appointee. It would issue capital stock with dividends being transferred to the U.S. Treasury or, if necessary, the dividends would be used for research and development, capital investment and establishment of cash reserves. It would appear that this type of organizational structure would be an important step toward realizing a truly competitive enrichment services program and re-establishing the United States position as a dominant player in the international market place.

Prior Unrecovered Government Costs

The difficulties experienced by DOE in its efforts to operate as a monopolist in a world enrichment service program driven by market forces is unfortunately further complicated by the issue of "prior unrecovered government costs." Both the Office of Management and Budget (OMB) and the General Accounting Office (GAO) argue that the domestic nuclear industry should be required to pay the U. S. Treasury billions of dollars for

outstanding debt. The position of these federal agencies is outlined in an October, 1987 Report in which GAO established the value of unrecovered costs at a level of $8.8 billion.

This position has been advanced dispite the fact that the enrichment facilities were originally designed and constructed for national defense purposes. Contrary to the assertions of OMB and GAO, the NARUC is unable to identify any provision in the Atomic Energy Act requiring payments by commercial customers to the U.S. Treasury. It is the NARUC's understanding of the enrichment program operation that, for the past two decades, the fees established for the commercial customers also reflected a depreciation element to provide for the recovery of capital. Considering the appropriations funding mechanism that was in place, the absence of a program cost allocation between the defense and commercial sector and that the federal government still holds title to the facilities, it is the position of the NARUC that retroactive recovery payments are inappropriate and should be precluded by Congress.

While there may be substantial disagreement with respect to the "debt" question, it seems clear that subjecting a new USEC to a retroactive debt of this nature would unnecessarily burden it from realizing its competitive potential. It would force the corporation to charge higher prices, inflating the price of uranium enrichment in this country and giving foreign facilities an even greater advantage in the competition for utility customers. To undertake the restructuring of the financial and oganizational management of the uranium enrichment enterprise and then impose new fees is, in our opinion, clearly counter-productive.

As I indicated earlier, the resolution adopted by the NARUC Executive Committee in 1987 did not address mill tailings; the residual product resulting from the process of extracting uranium from ore. For this reason, I am unable, at this time, to provide the Subcommittee with a specific NARUC recommendation on what constitutes an appropriate cost sharing arrangement for tailings reclamation between the states, the federal government, producers and electric utilities for the 26 active domestic uranium sites not included in the uranium Mill Tailings Radiation Control Act of 1978.

The legislation pending before the House would establish a $1.75 billion "Uranium Revitalization Fund." The nuclear utility industry would be directly responsible for $1.000 billion of this funding through the imposition of a fee on uranium loaded into reactors and indirectly for $450.0 million provided by the USEC. Included in this financing arrangement is the recognition by the domestic nuclear industry of a $364 million "initial debt" of the government corporation with repayment provisions extending over a 20 year period. The remaining $300.0 million would be advanced by the uranium producers.

It is the electricity consumers who ultimately will be burdened with the costs associated with the establishment and operation of the "Uranium Revitalization Fund." In this connection, the NARUC understands that it is the position of the domestic nuclear industry that the combined outcome of the legislative proposal may be cost neutral for electric ratepayers.

As you are aware, our diverse membership sometimes precludes the NARUC from arriving at a consensus position on controversial and divisive issues. However, the NARUC recognizes that the mill tailings reclamation is an important issue that remains unresolved. We are equally concerned about the present instability of the enrichment services program administered by DOE and the need to restructure this program as promptly as possible to permit it to operate effectively and efficiently. In an effort to assist this Subcommittee in its diliberations, the NARUC Committee on Electricity intends to address the $1.75 billion Uranium Revitalization Fund issue as part of its October, 1988 committee meetings and will submit its findings and recommendations for your future consideration.

Summary

The supply of enrichment services to the domestic nuclear power industry is a critical and necessary element in the fuel cycle of our nation's second largest source of electric generation. The evidence seems clear that the presence of international competition has resulted in the federal government relinquishing approximately 50 percent of the uranium enrichment program market; with accompanying excess production capacity and insufficient revenues required to finance technology improvements. This situation is exacerbated by the U.S. Treasury repayment issue and the OMB who continue to develop budgets which provide for repayment funds in the establishment of enrichment services fees. I regret that the NARUC is unable to be of more assistance with respect to the reasonableness of the "Uranium Revitalization Fund" provisions contained in the proposed legislation. We will, however, endeavor to report on this issue after our late October, 1988 Committee on Electricity meeting. Until this effort is completed, the NARUC respectfully recommends that:

1. Favorable consideration be extended to the concept of a government corporation should you conclude that such an organizational structure would be cost effective and permit it to compete in a responsible and responsive manner in the international market place.

2. Congress prohibit OMB from implementing retroactive recovery payments which only further serve to inhibit DOE's ability to participate in a competitive market.

In closing, again permit me to express our appreciation for this opportunity to present the NARUC's position before the Subcommittee. The NARUC would encourage this Subcommittee to continue exploring the issues of ensuring a competitive uranium enrichment program for our nation. We pledge our continued assistance as you proceed with this difficult debate.

Executive Committee Resolution No. 2

Resolution on Nuclear Enrichment Services

WHEREAS, The supply of enrichment services to the United States civilian nuclear power industry is a critical and necessary element in the fuel cycle of our second largest source of electric generation; and

WHEREAS, The Federal government has provided enrichment services to electric utilities on a timely, reliable, and dependable basis for a period now approaching two decades, operating as a monopoly until recent years; and

WHEREAS, The introduction of international competition has resulted in the Federal government surrendering a large share of the uranium enrichment program marketplace so that it is now experiencing excess production capacity as well as a shortage of revenues required to finance technology improvements; and

WHEREAS, The Federal government's ability to compete in the realities of a competitive market place has been hindered by the actions of the Office Management and Budget (OMB) and the General Accounting Office (GAO) to collect "unrecovered government costs" ranging from $3.5 to $8.8 billion for transfer to the U.S. Treasury; and

WHEREAS, The principle of "unrecovered government costs" as well as the employed methodologies underlying these calculations advanced by OMB and GAO are highly controversial and were never contemplated and thus represent a substantial departure in the approach by which appropriations and revenues have funded enrichment activities; and

WHEREAS, The implementation of such retroactive additional payment program places a substantial financial burden upon ratepayers and may prompt the electric utility industry to turn to international markets to provide uranium enrichment services; and

WHEREAS, The provision of uranium enrichment services constitutes a business enterprise with characteristics which may be distinguished from traditional government functions which do not involved a buyer-seller relationship; and

WHEREAS, The Federal government's uranium enrichment program could function more effectively as a government corporation where it could respond to the dictates of the market place; and

WHEREAS, The implementation of artificial trade or usage restrictions under consideration by the Congress of the United States will serve to increase the price of electricity and adversely afect the ability of the Federal government to compete in the international marketplace; now, therefore be it

RESOLVED, That the Executive Committee of the National Association of Regulatory Utility Commissioners (NARUC), assembled at its Summer Committee Meetings in San Francisco, California, supports the restructuring of the Federal government's enrichment service program so as to operate as a fully-competitive industry responding to market forces and thus providing low-cost energy to ratepayers, provided that the Congress of the United States concludes:

1. That unsubsidized savings to electric utility ratepayers are reasonably likely to occur;

2. That no elimination of safeguards over strategic nuclear materials will occur;

3. That privately owned enrichment facilities will be regulated by the Nuclear Regulatory Commission;

4. That the common defense and security of the nation will be protected; and

5. That competition in the provision of enrichment services will be furthered, and unregulated monopoly power will not be granted; and be it further

RESOLVED, Upon such findings, the NARUC Executive Committee recommends that:

a. The Congress of the United States favorably consider legislative proposals that would establish a government corporation that would operate similar to other government functions where the relationship with the public is one of an entrepreneur rather than a sovereign, and where users, rather than the general taxpayers, will be supporting the cost of such services.

b. The Congress of the United States prohibit OMB and GAO from implementing retroactive recovery payments to permit the pricing of enrichment services on a basis of participation in a competitive market.

c. The free trade policies with respect to the supply of enrichment services be continued.

Sponsored by the Committee on Electricity
Adopted July 22, 1987

Mrs. LLOYD. Thank you, Mr. Badger. Mr. Montange, please proceed.

STATEMENT OF CHARLES MONTANGE, COUNSEL, NATIONAL TAXPAYERS UNION, WASHINGTON, DC

Mr. MONTANGE. Madam Chairman, my name is Charles Montange and I am here today on behalf of the National Taxpayer's Union. I feel a little bit like Davey Crockett, that former Tennessee Congressman, must have felt at the Alamo, facing grim odds, but I'm going to do the honorable thing.

Mrs. LLOYD. That's what this process is all about.

Mr. MONTANGE. The National Taxpayer's Union represents the individual Federal taxpayer. We're always concerned to prevent, if possible, and to minimize, if inevitable, unnecessary and wasteful government spending. A lot of that has occurred in the Federal uranium enrichment program and would occur under the bills that are mentioned in your press release.

The Federal uranium enrichment program, which was set up by the Private Ownership Act of 1964, was supposed to be operated such that the full costs of providing enrichment services to civilian customers are borne by those customers. These costs were early determined with Congressional oversight and approval and with ample opportunity for input by utilities to include both direct and indirect expenses, including capital costs and imputed interest.

The commitment to recover these costs was in fact embodied in law in Section 161(v) of the Atomic Energy Act. I respectfully submit that everyone knew exactly what was intended by that and the Courts have said that provision says that the enrichment program is required by statute to recover its costs.

They recover those costs from the customers, not the taxpayers. Yet, the General Accounting Office calculates that approximately $9 billion in costs of providing civilian enrichment services have not been recovered. This isn't some new thing with GAO. They have repeated this determination on an annual basis for the last four years.

The only difference in their determination is the amount of unrecovered costs keeps going up. A major utility lobbying group, the Council for Energy Awareness, has admitted that the GAO computation is "technically correct." DOE has admitted those amounts, the Office of Management and Budget has admitted those amounts, everyone has admitted those amounts except some recent revisionists thinking among the utility industry.

Although DOE claims that it is now pricing to recover a portion of those costs, namely some $3 billion, the Treasury is not being repaid in sufficient amounts to assure recovery of anything. In any event, the nuclear utilities which had urged and unequivocally supported the very construction programs under which that $9 billion deficit was accumulated and which had explained to this Congress that they, not the taxpayer, would be paying for those construction costs, now urge that, in essence, the entire amount be written off.

They threaten to go to Europe or even to the Soviet Union, as you have heard today, for enrichment services if taxpayer subsidies are not confirmed, continued, and even increased. My recollection

is a year or two ago, you actually introduced some legislation bearing on the threat that they might go to the Soviet Union for enrichment services.

To make matters worse, the costs decommissioning DOE's existing enrichment plants will almost certainly exceed $3 billion, but DOE has not collected any reserves for that purpose. Those additional billions, we are virtually assured, will also fall to the individual Federal taxpayer in direct contravention of existing law. The total hit we taxpayers are taking is thus likely to be about $12 billion or more. A program which was to cost taxpayers nothing has been converted into an entitlement program for DOE contractors and the nuclear utilities and it is an entitlement program which even its beneficiaries are displeased with.

It is, therefore, hardly surprising that the National Taxpayer's Union wholeheartedly supports restructuring the Federal uranium enrichment program. Either we have to have the restructuring now or enforcement of Section 161(v) now, or we're going to continue to sustain large and increasing losses.

Our support for restructuring does not translate, however, into a blank check. We want a change, not an insubstantial facade. The three bills referenced in the Subcommittee's press release, H.R. 4934, H.R. 4975, and H.R. 4489, like their Senate predecessor S.2097 and it's various variants which the Senate has attempted to stick onto various pieces of legislation sent over to this House, purport to the address the problems of the prior program by setting up "corporations," more removed from political influence.

Pardon us, but those corporations are only fig leaves, evidently grafted onto the Senate package to provide an excuse for Administration acquiescence. There is no board of directors governing these new creations, they are not set up under the laws of any state, they just aren't corporations. They will be every bit as politicized as before. The only change is there will be less Congressional oversight.

As to taxpayer interest, this is what happens. All three bills write off the entire $9 billion in unrecovered costs. They do not even require that the enrichment program repay the U.S. Treasury for the billions of assets that we will be transferring to these corporations.

Now, the transfer of assets is taxpayer subsidy. Pardon me, gentlemen, they are our assets. They are not something that dropped from heaven. They do not assure any funding for decommissioning the enrichment plants. They repeal the one requirement in law protecting taxpayer interests, the requirement that all costs be recovered.

In addition, under H.R. 4975 and 4489, the first $450 million of revenue, if any, that these new corporations collect goes not to the Treasury, i.e. the taxpayer. Instead it is diverted to the domestic uranium industry. Utilities will put up an additional $1 billion more to benefit the domestic uranium industry through a special tax. We've heard that they dissent from that, but the ones that are not here dissenting have repeatedly assured us that this $1 billion tax is a political deal, that is a special interest bargain which means they will be willing to pay even less for Federal enrichment services. In other words, that $1 billion tax that's diverted to the

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uranium industry will mean lower enrichment prices, thus less chance to do research and development, to develop new technologies, to implement the AVLIS program, and to pay back the Treasury and to cover all these Federal assets that we're transferring to this new corporation.

In short, the meat and even the bones of what is left of the program are carved up among the various interest groups in the nuclear industry and the interest groups pretty much openly admit it. All of this is a taxpayer expense. In public, the industry lobbyists mumble a lot about whether this deal is at taxpayer expense, but as I previously noted, even the Council for Energy Awareness has candidly stated that this is "technically correct."

Proponents of the Senate bill and its progeny claimed that it will facilitate operation of the program as a business, but what a strange business. Since the time of Adam Smith, some two centuries ago, the definition of businesslike operations of a cost-efficient enterprise, which maximizes profit. The thing created by these various bills and S.2097 is certainly not cost-efficient. It gets all these taxpayer assets for free and it is directed to do anything but profit maximize.

Indeed, the representatives of the utilities and Senate sponsors of these bills have objected to us to any requirement of profit maximization. Instead, the industry bills tell the enrichment program to pursue goals like maximizing market share. Well, this is basically what the Business Advisory Council Committee, the Tri-Committee Business Advisory Panel criticized. It is tailor-made for disaster and it is what has brought a lot of the problems to the present program.

NTU is convinced that within six years of operation under any of these bills Congress will be confronted with three enrichment plants, largely on standby, no return on investment, billions in unfunded decommissioning costs, no new technology, and calls for further subsidy to retain a program against foreign government competition.

These bills will not revitalize uranium enrichment, they will not revitalize the domestic uranium industry. They will simply sweep a problem under the rug at the taxpayer expense, where it will continue to fester until it emerges again in another half dozen years.

Madam Chairman, there is an alternative to the status quo and to making the status quo worse, as per the Senate bill and the "me-too's." It's an honest approach to solve the problem. DOE and the utilities say, and we agree, the program suffers because it has not been operated as a business. Let us then operate the program as a business.

Two things are necessary to do this. One, the goal of profit maximization. Two, accountability to a board of directors with that goal in mind. As a corollary, the management of the program should be rewarded when they turn a profit and recover costs and they should not be rewarded when they fail to do so.

If these kinds of goals and corollaries are implemented, a Federal enrichment enterprise can be operated without taxpayer subsidy. The enterprise in a few years will command a positive value in the marketplace and could even be privatized, which is a long-term goal that the National Taxpayer's Union fondly supports. But in

any event, even if the enterprise is not privatized, at least it will not be operating at a continued loss to the taxpayers.

Now, H.R. 5181, which is entitled the Uranium Enrichment Reorganization and Taxpayer Protection Act of 1988, has been introduced by Congressman Eckart and Congressman Miller, and it adheres to these principles. The various versions of the Senate proposal superficially establish a government corporation but deny it any substance. In contrast, the Eckart-Miller bill establishes a government corporation under the laws of a state. That alternative provides that the sole objective of the corporation is to maximize the value of the program over the long term. We think that is a wonderful idea. It is elegant, it's efficient, it's deep politicized, it's consistent with our country's economy and professed ideals, it's what running the program as a business is all about.

After all, in our country if a private corporation does not operate to maximize its value for its owners, they can sue and have the government throw the buggers out. Why not implement the same kind of regime here as well? For the first time in the history of the entire enrichment program, H.R. 5181 envisions the restructuring of the program on a principled and future-oriented basis. We're pleased to commend that to Congress and to ask for your support of it.

Madam Chairman, three years ago when Mr. Lee of Duke Power wrote you, Mr. Fuqua, and Mr. Udall calling for a "write-off" as manifest in the so-called Domenici bill and its House progeny, you and your colleagues responded in support of GAO's position concerning the amount of unrecovered costs.

You stated in addition that all costs to the government should eventually be recovered. But we don't know if that is any longer possible, but we should at least make a stab at doing something for the taxpayer in this area and not simply repealing the one thing that is allegedly affording us some protection.

Thank you for this opportunity to testify and we look forward to working with the Members of the House Science, Space, and Technology Committee to address these issues in the future.

[The prepared statement of Charles Montange follows:]

NATIONAL TAXPAYERS UNION

A NONPARTISAN, NONPROFIT ORGANIZATION DEDICATED TO THE PUBLIC INTEREST

325 PENNSYLVANIA AVENUE, SOUTHEAST WASHINGTON, DISTRICT OF COLUMBIA 20003 TELEPHONE: AREA CODE (202) 543-1300

U.S. HOUSE OF REPRESENTATIVES
SCIENCE, SPACE AND TECHNOLOGY COMMITTEE
SUBCOMMITTEE ON
ENERGY RESEARCH AND DEVELOPMENT

FEDERAL URANIUM ENRICHMENT RESTRUCTURING PROPOSALS

TESTIMONY OF THE NATIONAL TAXPAYERS UNION

by
Charles H. Montange, Counsel

OCTOBER 6, 1988

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Madam Chairman and members of the Subcommittee, my name is Charles Montange, and I am here today on behalf of the National Taxpayers Union.

Summary

We wholeheartedly support restructuring of the federal uranium enrichment program. The present enrichment program is costing taxpayers billions, and, to add insult to injury, evidently no one is getting value commensurate to the sacrifice. On the other hand, National Taxpayers Union wholeheartedly opposes H.R. 4934, 4975 and 4489, and their Senate counterparts, S. 2097 and its variants. All three bills, like their Senate variants, simply codify into law the very flaws which have been the current program's problem. Moreover, they transfer whatever value is left in the program from taxpayers to various components of the nuclear industry. There is a better way -- H.R. 5181 as proposed by Congressmen Eckart and Miller. H.R. 5181 is designed to put value into the program and to protect the federal taxpayer. NTU is pleased to indorse it and taxpayers can only be grateful to its sponsors.

Special Interest Bargaining

The National Taxpayers Union represents the individual federal taxpayer. We seek to prevent if possible, and to minimize if inevitable, unnecessary and wasteful government spending. We believe that most members of Congress share this goal, but all too often are caught up in special interest group politics and bargaining. Each interest group lobbies hard for benefits at the expense of the general taxpayer. The result is inevitably gross economic distortions and inefficiencies, heavier burdens for the general taxpayer, and a soaring federal deficit: particular industries or interest groups make out like bandits at taxpayer expense with no reasonable return, and even a loss, for society as a whole. It is, in the word of a recent presidential

commission, "irrational."[1] Trying to contain this problem is essential not only to protect the federal taxpayer but also to maintain a vigorous, dynamic and growing economy capable of meeting our needs and providing employment opportunities. In other words, it is a consumer and worker issue as well as a taxpayer issue.

It Got the Enrichment Program

Unfortunately, the disastrous outcome of interest group bargaining is exactly what has happened with the current federal uranium enrichment program. The program, which was set up by the Private Ownership Act in 1964, was supposed to be operated such that the full costs of providing enrichment services to civilian customers are borne by those customers. These costs were early determined, with congressional oversight and approval, to include both direct and indirect expenses, including capital costs and imputed interest. The commitment to recover these costs was embodied in section 161v. of the Atomic Energy Act.[2]

Yet the General Accounting Office calculates that approximately $ 9 billion in costs of providing civilian enrichment services have not been recovered.[3] A major utility

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[1] See "Economic Public Policy" in Privatization: Toward More Effective Government, Report of the President's Commission on Privatization 233-34 (March 1988): "A political system of interest-group bargaining will almost certainly result in very large inefficiencies by society in the use of its available resources. For example, each interest group will face the following incentive: If government can be pressured to provide greater goods and services for that particular group, the full benefits will flow to the group. Yet, the costs are likely to be much smaller, because the burden of taxation to pay for the benefits will be spread over the full body of taxpayers. Each interest group will typically have a strong incentive to demand as much in goods and services from government as it can get. ... [Under this regime,] government would tend toward ever-growing budget deficits. ... [B]oth the absolute magnitude and the distribution of goods and services provided by government [under this regime] are likely to be irrational."

[2] 42 U.S.C. § 2201v. See United States v. Consolidated Edison Co. of New York, 452 F.Supp. 638, 657 (S.D.N.Y. 1977), aff'd, 580 F.2d 1122 (2d Cir. 1978) (DOE's uranium "enrichment program is required by statute to recover its costs").

[3] E.g., Statement of Keith Fultz (GAO), before the Energy & Power Subcomm. of the House Energy and Commerce Comm., released April 8, 1987, at p. 1. DOE has admitted that unrecovered costs stood at $ 7.5 billion at the end of September, 1985. See 51

lobbying group, the Council for Energy Awareness, has admitted that this computation is "[t]echnically ... correct."[4] And the Department of Energy also agrees, but has arbitrarily "written-off" all but about $ 3 billion of those costs.[5] Although DOE claims that it is pricing to recover this, certainly the Treasury is not being repaid in sufficient amounts to assure recovery of anything.

In any event, the nuclear utilities, which had urged and unequivocally supported the very construction programs under which the $ 9 billion deficit was accumulated,[6] and which had soothingly explained that they -- not the taxpayer -- would be paying,[7] now urge that the entire amount be written off.[8] They

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Fed. Reg. 3624 (Jan. 29, 1986).

[4] Letter, J. Siegel (V.P., U.S. Council for Energy Awareness) to M. Frazier (Member, NTU Bd. of Directors), June 7, 1988 ("Technically NTU is correct in its assertion of significant 'unrecovered costs'").

[5] E.g., OMB, Major Policy Initiatives 88 (1986) (write-off to about $ 3.5 billion); 51 Fed. Reg. 3629 (Jan.29, 1986). GAO says that the write-off is beyond DOE's authority. E.g., Letter, Comptroller General to the Honorable John Dingell, Dec. 27, 1984; Letter, Comptroller General to the Honorable Edward J. Markey, Feb. 19, 1986.

[6] For example, utilities urged Congress to reinvest in a new enrichment plant (since cancelled) on the ground that "the economic penalties that could be imposed by a shortfall of enrichment capability far exceed the costs that would be associated with a temporary oversupply...." Future Structure of the Uranium Enrichment Industry, Hearings before the Joint Comm. on Atomic Energy, 93d Cong., 2d Sess. 175 (1974) (testimony of EEI through Mr. Kuhns). See also Uranium Enrichment Policy, Hearings Before the Subcomm. on Energy Res. & Dev. of the Senate Energy & Nat. Res. Comm., 95th Cong., 2d Sess. at 80, 87, 444 (1978) (EEI statements in favor of gas centrifuge and opposing GAO suggestion that investment in additional enrichment capacity be postponed: "the need to proceed rapidly with the planned ... plant is urgent and cannot be overemphasized"); Uranium Enrichment Policy, Hearings before the Energy Cons. and Power Subcomm. of the House Energy & Power Comm., 98th Cong., 1st & 2d Sess. 315-26 (1983-84) (continued industry support).

[7] See 1978 Hearings at 75 & 88.

[8] E.g., Letter, W. Lee to the Honorable Chairmen Fuqua, Udall and Lloyd, Sept. 27, 1985; industry testimony on Title III of S. 2097 and its House progeny.

threaten to go to Europe or even to the Soviet Union for enrichment services if taxpayer subsidies are not confirmed, continued and even increased. To make matters worse, the cost to decommission DOE's existing enrichment plants will almost certainly exceed $ 3 billion, but DOE has not collected any reserves for that purpose. Those additional billions, we are virtually assured, will also fall to the individual federal taxpayer, in direct contravention of existing law.

The total hit we taxpayers are taking is thus likely to be $ 12 billion or more. A program which was to cost taxpayers nothing has been converted into an entitlement program for DOE contractors and the nuclear utilities. And it is an entitlement program with which even its beneficiaries are displeased. It appears on its face to amount to nothing more than wealth destruction.

The Interest Bargaining Got H.R. 4934, H.R. 4975, and H.R. 4489

It is therefore hardly surprising that the National Taxpayers Union wholeheartedly supports restructuring the federal uranium enrichment program. But our support for restructuring does not translate into a blank check. We want a change, not an insubstantial facade.

The three bills referenced in the Subcommittee's press release -- H.R. 4934, H.R. 4975, and H.R. 4489 -- purport to address the problems of the prior program by setting up "corporations" more removed from political influence. Pardon us, but that is only a fig leaf, evidently grafted on to the packages to provide an excuse for Administration acquiescence. There is no board of directors governing these new creations. They will be every bit as politicized as before.

As to taxpayer interests, this is what happens: all three bills write-off the entire $ 9 billion in unrecovered costs. They do not even require that the enrichment program repay the U.S. Treasury for assets transferred. They do not assure any funding for decommissioning the enrichment plants. They repeal the one requirement in law protecting taxpayer interests: the requirement that all costs be recovered.[9] In addition, under H.R. 4975/4489, the first $ 450 million or so in revenue, if any, over operating costs which the new enrichment entity receives goes not to the Treasury but to the domestic uranium industry. Utilities will put up $ 1 billion more to benefit the domestic uranium industry through a special tax. The utilities have repeatedly assured us that this is a "political deal" (i.e., a "special interest bargain") which means they will be willing to

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[9] That is, they repeal section 161v. of the Atomic Energy Act, 42 U.S.C. § 2201v.

pay even less for federal enrichment services. In short, the meat and even the bones of what is left to the program are carved up among the various interest groups in the nuclear industry, and the interest groups openly admit it.[10] All of this is at taxpayer expense. In public industry lobbyists mumble a lot about whether this "deal" is at taxpayer expense, but as I have previously noted, even the Council for Energy Awareness has candidly stated that this is "technically correct."[11]

Proponents of the Senate bill and its progeny claim that it will facilitate operation of the program as a business -- but what a strange and Potemkin-like business. Since the time of Adam Smith some two centuries ago, the definition of business-like operation is a cost-efficient enterprise which maximizes profit.[12] The "thing" created by these various bills and S. 2097 is certainly not cost-efficient (it is taxpayer subsidized), and it is directed to do anything but profit maximize. Indeed, representatives of the utilities and the Senate sponsors of these bills have objected to profit maximization. Instead, the industry bills tell the enrichment program to pursue goals like maximizing market share. This is tailor-made for disaster.

NTU is convinced that within six years of operation under any of these bills, Congress will be confronted with three enrichment plants largely on stand-by, no return on investment, billions in unfunded decommissioning costs, no new technology, and calls for further subsidy to retain a program against foreign-government competition. These bills will not revitalize uranium enrichment; they will not revitalize the domestic uranium industry. They will simply sweep a problem under the rug at taxpayer expense, where it will continue to fester until it emerges again in another half dozen years.

But the Special Interests Did Not Get H.R. 5181

Madam Chairman, the alternative to the status quo and to making the status quo worse per the Senate bill and the House "me-too's" is an honest attempt to solve the problem.

DOE and the utilities say, and we agree, that the program

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[10] E.g., Oral Statements by Mr. William Lee (Duke Power) before the Ways & Means Committee and the Energy and Power Subcommittee of the House Energy and Commerce Comm., August 10, 1988; Letter, EEI to the Honorable Pete V. Domenici, Dec. 9, 1987 (enactment of part of the package without Title III subsidies for utilities "would be actively opposed").

[11] See note 4 supra.

[12] Adam Smith, The Wealth of Nations (1776).

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suffers because it has not been operated as a business. Let us then operate the program as a business. Two things are necessary to do this: (1) the goal of profit maximization and (2) accountability to a board of directors with that goal in mind. As a corollary, the managers of the program should be given incentives to recover costs and to turn a profit. These incentives include the stick of specific payments to fund decommissioning of the enrichment plants and to repay some of the federal investment, and the carrot of reasonable wage and salary bonuses if these payments are made, and a profit returned.

In this fashion, a federal enrichment enterprise can be operated without taxpayer subsidy. The enterprise in a few years will command a positive value in the marketplace and could be privatized, a long-term goal which the National Taxpayers Union supports. But if the enterprise is not privatized, at least it will not be operating at a continued loss to taxpayers.

H.R. 5181, the Uranium Enrichment Reorganization and Taxpayer Protection Act of 1988, introduced by Congressman Eckart and Congressman Miller, adheres to these principles. The various versions of the Senate superficially establish a government corporation but deny it any substance. In contrast, the Eckart-Miller bill establishes a government corporation under the laws of a state. The Eckart-Miller alternative provides that the sole objective is to maximize value of the program over the long term. We think this is a wonderful idea. It is elegant. It is efficient. It is de-politicized. It is consistent with our country's economy and professed ideals. It is what running the program as a business is all about. After all, in our country, if a private corporation does not operate to maximize its value for its owners, they can sue and have the government throw the unprofitable management out. Why not implement the same kind of regime here as well?

H.R. 5181 for the first time in the entire history of the enrichment program envisions a restructuring of the program on a principled and future-oriented basis. National Taxpayers Union is pleased to commend H.R. 5181 to Congress and to recommend that all friends of the taxpayer, all proponents of a growing and vigorous economy, and all disciples of an efficient and vigorous nuclear industry, support it.

Conclusion

Madam Chairman, three years ago when Mr. Lee of Duke Power wrote you, Mr. Fuqua and Mr. Udall calling for a "write-off" as manifest in the Domenici bill and its House progeny,[13] you and

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[13] Letter, W. Lee to the Honorable Chairmen Fuqua, Udall and Lloyd, Sept. 27, 1885.

your colleagues responded in support of GAO's position concerning the amount of unrecovered costs, and stated that "all costs to the government should eventually be recovered."[14] I have annexed copies of this correspondence to my testimony. If Congress wants to recover any significant portion of the unrecovered costs, the asset values, and the yet-unfunded decommissioning costs associated with the federal uranium enrichment program, Congress must reject the approach of H.R. 4934, H.R. 4975, and H.R. 4489. Congress instead should actively work for the adoption of H.R. 5181.

Thank you for this opportunity to testify, and we look forward to working with the members of the House Science & Technology Committee to address these issues in the future.

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[14] Letter, Chairmen Fuqua, Udall and Lloyd to Mr. W. Lee, Nov. 6, 1985.

DUKE POWER COMPANY
P. O. Box 33189
CHARLOTTE, N. C. 28242

WILLIAM S. LEE
CHAIRMAN OF THE BOARD &
CHIEF EXECUTIVE OFFICER
(704) 373-4083

DOUGLAS W. BOOTH
PRESIDENT &
CHIEF OPERATING OFFICER
(704) 373-4702

September 27, 1985

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The Honorable Don Fuqua, Chairman
Committee on Science and Technology
U. S. House of Representatives
Washington, D. C. 20515

The Honorable Morris K. Udall, Chairman
Committee on Interior and Insular Affairs
U. S. House of Representatives
Washington, D. C. 20515

The Honorable Marilyn Lloyd, Chairman
Subcommittee on Energy Production and Research
U. S. House of Representatives
Washington, D. C. 20515

Dear Congresswoman Lloyd & Congressmen:

As chairman of your Tri-Committee Business Advisory Panel on the Department of Energy's Uranium Enrichment Enterprise, I transmitted to you last year our report which contained a number of findings and recommendations to improve the management of the enrichment program. Since that time DOE has responded to many of the recommendations in a very positive manner and the program has begun to be successful in reducing costs, although DOE prices are still significantly above those of their competition.

However, recently I have reviewed legislation which has the potential for significantly harming the enrichment enterprise. The legislation is entitled Uranium Enrichment and Power Sales and is contained in the House Energy and Commerce Committee Budget Reconciliation Amendment. While it is certainly appropriate that the DOE enrichment program repay its debt to the Treasury incurred through net appropriations, it is imperative that the debt be defined prior to any such repayment. The proposed legislation does not define the debt, but directs "partial repayments" of $410 million in 1986-1988 plus repayments using the revenues from the resale of unused power under contract. However if one calculates the net appropriation, applying appropriate full cost recovery to military enrichment, the total debt is approximately $355 million, including interest on the appropriations. This debt is less than the specified "partial repayments" of $410 million and obviates the need for any resale of DOE contracted power.

The debt issue is important to DOE's ability to retain its share of the world enrichment market, which has serious implications to DOE price, balance of trade and nuclear non proliferation issues. Commercial enrichment customers,

foreign and domestic, can hardly be expected to make long-term commitments to a program which has an undefined debt to be repaid from future revenues. Modifying the legislation to conclusively define the debt as the net appropriations to the program, $355 million, and direct the repayment in the 1986-1988 time frame would remove this cloud from the enrichment program and permit DOE to provide competitively priced enrichment services in the future.

The definition and repayment of appropriate prior appropriations would also appear to be a necessary step prior to the establishment of a private business management structure for the enrichment enterprise. This recommendation has not yet been responded to by DOE, but it is important if the program is to be provided the management stability and flexibilities necessary to compete in the world market.

Respectfully,

W. S. Lee

JFN:dyh

cc: The Honorable Jim Broyhill
The Honorable Ed Markey

Congress of the United States

Washington, D.C. 20515

November 6, 1985

Mr. William S. Lee
Chairman of the Board
and Chief Executive Officer
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28242

Dear Mr. Lee:

Thank you for your letter of September 27, 1985 regarding the House Energy and Commerce Committee's legislative proposal to require the Department of Energy to repay the federal investment in the uranium enrichment program. We support the Department of Energy's efforts to keep its uranium enrichment business viable in the face of strong competition from foreign government, but we remain firmly committed to the goal of full cost recovery.

As you may know, the General Accounting Office reports that there is an unrecovered balance in the enrichment program in excess of $6 billion. Most of this balance ($4.6 billion) is due to federal investments after 1971. Additionally, prior to 1971, the government, in fairness to the utilities, elected not to recover full depreciation and interest on the excess gaseous diffusion capacity since the plants had essentially been built for military purposes. This cost recovery approach was used until 75% of the plant capacity was dedicated to the commercial sector, at which time full depreciation and interest was charged.

We agree that it may be appropriate to charge the government, and thus the taxpayer, for some percentage of the enrichment complex, since it was and is still needed for defense purposes. For example, it might be appropriate to charge the taxpayer for ten percent of all capital expenditures in the program, rather than charge the commercial customers for all capital expenditures. Additionally, the Congressional Budget Office recommends the use of a more reasonable imputed interest rate, which may significantly affect the calculation of the total government investment in the enrichment business. How these changes might affect the $6 billion figure has not been determined, but it clear that a significant sum would still be owed to the government.

We are concerned about the implications of raising the price of enrichment services in a highly competitive market. In this regard, DOE has assured us that requiring payback in approximately the amounts indicated by the Energy and Commerce Committee will not cause the FY 1986 enrichment price to rise. Nevertheless, under the payback proposal price reductions in future years may not be possible, and this concerns us.

We are most interested in preventing the further erosion of DOE's customer base because this will jeopardize the government's investment in the enrichment program and may force it to subsidize the business to a much greater extent to keep it viable.

The GAO has recommended that the Department's statutory mandate to recover its cost be modified to allow DOE more flexibility to respond to the marketplace. We agree that this may be necessary in order for DOE to offer competitive enrichment prices, but we also believe that all costs to the government should eventually be recovered. We further agree with the General Accounting Office that any consideration given to altering the Atomic Energy Act's full cost recovery provision also include a reevalation of the nation's objectives for serving the U.S. and international uranium enrichment markets. Toward this end, GAO is currently preparing a report evaluating the costs and benefits to the nation of various uranium enrichment objectives. We anticipate this work being completed in time for consideration in the context of the FY-1987 budget process.

We appreciate your continued interest, as a DOE customer and as the Chairman of the Tri-Committee Business Panel, in the uranium enrichment enterprise. We hope that you will share your thoughts with us on the program's management in the future.

Sincerely,

DON FUQUA
Chairman
Committee on Science
and Technology

MORRIS K. UDALL
Chairman
Committee on Interior
and Insular Affairs

MARILYN LLOYD
Chairman
Subcommittee on
Energy Research
and Production
Committee on Science
and Technology

Mrs. LLOYD. Thank you very much, Mr. Montange, Mr. Badger, and Mr. Kearney. Mr. Kearney, on Page 2 of your statement that you submitted for the record, you said a fair and effective solution to the problems concerning the uranium enrichment business should be found. What are the problems that you are referring to? Let's elaborate on the problems that we're finding a solution to.

Mr. KEARNEY. I think that the basic problem is that the DOE is not able to respond to its customers. It has some restrictions on it that doesn't allow it to operate in a business-oriented manner. For example, in the past, we had the question of the non-proliferation where what we did was we pre- enriched a lot of uranium and now that is part of these assets that we're told that we have to pay imputed costs on.

That is certainly not a way to operate a business- oriented operation. And we also have this cloud of this alleged unrecovered cost under the present situation and I think those are the problems that we think could be solved or at least that we could have a step toward solution if we had a government corporation which was more businesslike oriented.

Mrs. LLOYD. You also stated that 4975 would keep the fuel costs as low as possible. Now, we have to look at the costs of creating a new Administrative body, which the DOE presently does. We're going to look at a tax to subsidize the uranium industry and we really haven't come to grips with where this ratepayer is going to benefit because we have costs out there that we're not looking at right now.

Mr. KEARNEY. First of all, I think that—I don't think we're going to be duplicating the present government Administrative body—I think we're going to be replacing it with the government corporation. It is true that there are going to be some costs that are a result of the Title I and Title II of the Act, but I think that, as Mr. Garrish has pointed out, the advantages to a business-oriented type of operation—as far as personnel is concerned, as far as price flexibility is concerned—is a first step towards a more business-oriented operation.

And as he pointed out, we would be able to overfeed the enrichment operation and I believe he indicated that there could be a savings of as much as $400 million by such an operation. I think that only if we have certainty to the process, to the enterprise, are we ever going to be able to get the AVLIS technology moving and I think that that is one of the areas that is most important in the long-term cost benefits that I could see through the operation of this bill.

Mrs. LLOYD. My concern is—I just want to look at all aspects of this and not jump before we've certainly given this very serious consideration. For instance, when you look at the gaseous diffusion plants. We know that the intense energy cost has helped to make us uncompetitive, but won't we have this same—aren't they going to inherit all these problems as well?

Mr. KEARNEY. Well, it is true that as far as the operation of the current facilities are concerned that the cost of power is going to be the same. But I think there are other opportunities to be able to operate in a more cost effective manner. I know my colleague on

the far left here will not want to hear this, but after all, these facilities were built basically for defense.

We have made some estimates of the assets that are dedicated now to the production of commercial nuclear power and in order to be competitive and to decrease the costs, it is not impossible to think that sometime in the future they would not consider depreciation or imputed interest.

Now, I think it's important to point out, if I may just for a second be tangential about this, I think it's important that we have domestic enrichment facilities for the security of this country, that we shouldn't depend on that important aspect for foreign resources, and the only way we're going to have it is to be competitive. Otherwise, we're going to lose out. And if being competitive means that we're going to have—in this business-oriented atmosphere—that we're going to have to consider all these "costs," then I think that's what we're going to have to do.

Mrs. LLOYD. I think as we look at restructuring of the enrichment enterprise that we also take a good close look at how we got from where we were in 1975 and where we are today and go back to the fact that we did supply 100 percent of the world's market of enriched uranium. Then what happened? Along the way, we became an unreliable supplier and I really haven't heard this addressed because to me one of the advantages of the private sector involvement is to inject a greater sense of reliability—as a reliable partner, as a reliable supplier. It wouldn't be subjected to the whims of the Administration or Congress, that it would be run in a businesslike manner.

And this to me is something I haven't heard addressed that I really think is going to give more strength to the structure than anything that we're doing.

Mr. KEARNEY. Madam Chairman, that is probably something we should have said because you are absolutely correct. We have to be a reliable supplier and I know in talking to some of my Japanese and other friends, they are sometimes very confused about the manner in which things change.

Mrs. LLOYD. I've travelled the pacific rim country. I've talked to the Japanese. I've talked to the Koreans. I've talked to the Taiwanese. They are still buying some of their enriched uranium from us at a higher price. But the reason they went to the international market wasn't our price, entirely. It was the fact that they felt like they couldn't count on us.

Mr. KEARNEY. You are absolutely correct.

Mrs. LLOYD. And this is an area of my concern that you've heard me express from this chair repeatedly over the years and I want us to look at all of the aspects; make sure that we aren't buying more problems, our same old problems in a new package, that we give this proper consideration and make sure that we address all of the pluses as well as the minuses. This is where I'm coming from and I want this clearly understood.

Mr. KEARNEY. Well, Madam Chairman, as you well know, an electric utility first and foremost is looking for reliability of supply of coal, uranium, any type of services that it has because it has this burden of serving the public instantaneously when the public wants it. So reliability of equipment, reliability of supply is of

utmost importance to the electric utility industry and that's why reliability of enrichment services is of utmost importance to our industry.

Mrs. LLOYD. Well, I think you know the chair believes that a reliable supply of domestic enriched uranium to me is as important to this country as a supply of our fossils. I put them both in the same category.

Mr. KEARNEY. We agree.

Mrs. LLOYD. I didn't mean to take up all of your time. Pardon me, gentlemen. Mr. Badger, on page 3 you note that DOE may be pricing its services to recover the cost although they may be doing this, the Treasury is not being repaid in sufficient amounts to ensure recovery of anything.

Well, now, if DOE cannot for competitive reasons price its enrichment services at a level high enough to return money to the Treasury, what would you change to allow such recovery?

Mr. BADGER. I think perhaps—the trouble in part about trying to respond to you and I hope you'll understand it's not intended to be nonresponsive. One thing I've learned about chairing a committee on electricity of 23 states is the very diverse composition of our membership.

When we examined this issue in 1987, we didn't have all of the ramifications of what I would probably define today as a compromise piece of legislation and as I mentioned, we didn't address the issue of reclamation or the $1.75 billion and that's the issue that I want to have our committee address because clearly that is a subsidy and it ties in that obviously the ratepayers are going to be required to subsidize this and I don't like to use that word but it seems very clear that while we've had suggestions that this perhaps may be cost neutral, I think it's still possible that it may not.

I think from our position, we're going to probably examine this legislation proposal from the point, is the overall comprehensive package—will it be beneficial to the rate payers of this country? I would feel very uncomfortable, in fact I think as you just mentioned, to have a situation that we would have nuclear plants operating in this country and have the supply of uranium services in jeopardy and create situations in which rate payers would be expected to pay all the fixed costs associated with the uncertainties of trying to provide service.

So, I don't know whether that's been—

Mrs. LLOYD. Let me back up a minute. That was on Mr. Montange's statement, so let me maybe refer that question to Mr. Montange at this time.

Mr. MONTANGE. Sure. I think I recall the question, Madam Chairman. Let me go at that—it's a good question. Let me go at that several ways. First, under existing law, the Nuclear Regulatory Commission and the Department of Energy have power to require domestic utilities to use domestic enrichment services if necessary for national security reasons or for purposes, I believe, of national energy security.

Thus, there really isn't a problem of the utilities being diverted to go—or be forced to go abroad because the price that DOE charges is allegedly slightly higher or somewhat higher than they could get from a foreign enrichment supplier.

The federal government could help them out of that situation which the rate commissions, they say, would force them into—forcing them to go abroad by simply having a regulation saying, no, you will purchase X amount here at the Department of Energy. We can keep our market. As 161 (b) and 161 (p) of the Atomic Energy Act—they're codified in Title 42 of the United States Code Section 2201 (b) and (p).

The second thing to note is that the foreign enrichment suppliers are currently pricing their product on their home markets at prices vastly in excess of what the utilities claim they're being offered over here.

The price that DOE states that URENCO and EURODIF are charging to their captive utility customers in Europe is roughly $180 per SWU. Now, DOE says that it has to drop its own SWU price to what's now an average of what I believe is around $110 per SWU, says it has to drop its price to $110 to compete with these foreign enrichment suppliers here in the U.S. of A.

Well, in the tax payers union position is that something like that is that if there's that kind of differential pricing, why isn't DOE using our trade laws to get at the evident dump rather than asking the taxpayer to subsidize the federal uranium enrichment program to take care of this problem.

The third thing that we would note is that we haven't seen data sufficient to show that there's available foreign enrichment capacity to sustain a wholesale diversion of business from current markets served by DOE domestic and abroad to European suppliers.

They'd have to build substantial new capacity. It would take five to six years minimum to bring that capacity on line and it would depend upon the utilities going there, making long-term commitments because no one in this market which is saturated with excess capacity by DOE would build an enrichment plant without—

Mrs. LLOYD. Are you saying at the present time that we do not have the capacity to look out for a new contract?

Mr. MONTANGE. Oh, we have capacity in the U.S. of A. There's no question. We are the major source of excess capacity in the world, Madam Chairman. As you and I both know, your plant at Oak Ridge is on standby right now. The entire capacity of that plant's available. My point is that URENCO and EURODIF do not have that kind of excess capacity. They could sustain some diversion of business from DOE in the short term but over the long term they would have to build new capacity to supply it.

I don't think they would unless there were long-term commitments to do that and I don't know whether there will be long-term commitments. As to the Japanese market, I would note that I believe the Japanese are going to build enrichment capacity regardless of what U.S. prices are. We can dump our prices to $100 a SWU, $90 a SWU, $80 a SWU—the Japanese are going to build an enrichment plant. They like to have as our utilities would like to have—a domestic source of supply.

Mrs. LLOYD. Will you gentlemen accommodate Mr. Kearney in this?

Mr. KEARNEY. I would like to make a couple of comments. First of all, it's my understanding of the reading of 161 (b) and (p) that DOE does not have this authority. That NRC definitely does have

the authority but only for national security. And right now, DOD has about 20 to 30 years of uranium supply so there is no need to restrict utilities to DOE enrichment.

Secondly, I don't think there is as far as the price is concerned, as Mr. Badger has pointed out, several utilities have decided and told the DOE that the 10-year forward supply they are not going to depend upon DOE at the moment and I submit to you that that's not a frivolous decision. That these utilities have examined the market, perhaps have had discussions with others, and they feel comfortable that they can have competitive prices.

The other thing is that certainly there can be no wholesale diversion of enrichment from the United States abroad. But with the modular type construction of the centrifuge which seems to be available with European technology of something like a million SWUs could be made available in a discrete period of time. In fact, as you probably know, there have been discussions of building domestic facilities in this country with foreign technology.

So, I think that the flexibility that the utility has to seek enrichment some other place is real and is something that I think should be taken into consideration when you look at the facilities that are under the operation of the DOE.

Mrs. LLOYD. Mr. Badger, do you want to comment on this at this point?

Mr. BADGER. I think I would probably agree with Mr. Kearney's observation there.

Mrs. LLOYD. Well, I have one other question for you. You conclude that it's likely that the SWUs will continue to rise and produce an even greater loss in the market by the Department of Energy. I want to know what led you to this conclusion since DOE has apparently lowered their prices to meet the competition.

Mr. BADGER. The statement that's included in my testimony perhaps it was—should have been more accurately done but that really relates to our understanding of the commitments that are being considered by the utility companies to terminate these commitments in the late 1990s.

If these commitments are terminated, my comment was really directed at the appropriation process, as its now structured, would end up with less revenues. A certainly disproportionate amount of cost that would have to be supported by other users and therefore, I'm leaping to the possible conclusion that having less work units in the same cost under the operation of appropriation process would possibly lead to a higher cost per unit for enrichment services.

Mrs. LLOYD. Thank you very much. Mr. Fawell.

Mr. FAWELL. I find this all very interesting and somewhat confusing, too. Mr. Montange, you seem to be saying, and everybody seems to be saying, that it is important obviously to have domestic enrichment services and everybody is saying it has to be competitive and I think everybody apparently is saying that it certainly hasn't been competitive in the past. Nobody has come right out and said DOE has goofed things up and just isn't operating and hasn't operated very well.

I do sense that may be the feeling and so we're all trying to find ways in which it can be competitive and cost efficient so that new technology can be inculcated, etcetera.

My question, Mr. Montange, is do you think that in effect, things are so screwed up right now that that just—it isn't possible to be able to be so competitive and efficient that you're going to be able to get those unrecovered costs back, be they four or five or nine or twelve million dollars or whatever and be able to get technology that is needed to put this operation on a solid footing.

It seems to me DOE ought to be able to do everything they're talking about doing under this so-called private corporation which is not private at all. What we're really haggling over is how in the world we can get competitive and what we're going to do in regard to the arguments over all of these unrecovered costs. Can you get there from here when you judge how bad the situation apparently is?

Mr. MONTANGE. Well, Mr. Fawell, I think that the NTU position is closely parallel to the position that was espoused some three years ago by the Chairs of the Science and Tech Committee Interior and Insular Affairs and by Mrs. Lloyd in which she said that we ought to eventually strive to recover these costs. There may have to be some adjustments but that we ought to try to get as much as we can. Now, our basic problem with the way that the current program is being implemented and the industry proposals is all that they do is maintain and sanctify the current status quo.

The current status quo is not a situation in which we have an enterprise which is operating to maximize the value of the enterprise for the United States government, for the taxpayer. We're the ones who really own this.

Rather, it's operating in a kind of fashion which seems to be oriented to groping to maximize its market share but very unsuccessfully without making any investment for the future. It's kind of a program that's caught in a vortex.

It's feeding its current customers but it's not really developing anything for the future and it's feeding its current customers at prices they feel are still excessive but it's doing it very inefficiently and at taxpayer expense—direct and indirect.

It's doing it—at the minimum they have to admit that the federal taxpayer—the federal treasury is not receiving anything on the asset that we've invested in that program and as a minimum when this thing was set up they have to admit that the idea was that the federal investment would be recovered. The taxpayer assets going to the program would be recovered. In fact, what has happened was they were all reinvested in the program—in large construction programs which were purely for civilian purposes, the gas centrifuge plant that was being built at Portsmouth had no military application.

It was being built purely for a civilian market and much of their R&D effort today is purely civilian in orientation. We don't know how much. We think that there should be an effort to get something and you're not seeing it in either the current program or in any of the bills that are listed in the press release of this subcommittee.

Mr. FAWELL. Are you saying and I think you would agree with Mr. Kearney then that there has not been sound allocation between commercial sales and defense and federal policy which fluctuates always—

Mr. MONTANGE. The taxpayers union, our position is that we will go no further than the Department of Energy and the GAO in the analysis of that subject where they supposedly have more information on it than us. Both the GAO and the DOE have—well, the DOE has flatly rejected the utility argument that there's not been a proper allocation. They did that in the Federal Register about 18 months ago when they issued new enrichment criteria. The General Accounting Office has suggested that perhaps there should be a reallocation but the reallocation that GAO is talking about would amount to about $1 billion as I understand it—at most $1.5 billion and for our purposes that's almost—I mean 1.5 billion off of 9 billion would lead you to 7.5 in unrecovered cost, not zero.

So, we still have a very marked difference between where we would be in unrecovered cost and where the utilities want to be.

Mr. FAWELL. But when you get to those unrecovered cost, they seem to be so immense and I would throw this question to the other two witnesses, is it possible to put this into an efficient business operation unless we do some type of compromising on what those unrecovered costs are?

Mr. MONTANGE. One further note, the same kind of thing happens on large construction projects like nuclear reactors, nuclear electrical generating stations. These unrecovered costs accumulate until they're put into the rate base for recovery. What's happened here is that we've had construction programs and interest on those construction programs which has continued to accumulate because no one has ever put it in the rate base, so to speak.

No one has ever really recovered it. It's the same thing that happens on their side, they just don't want to recover those costs when it's on the taxpayers' back.

Mr. KEARNEY. Could I comment on that?

Mr. FAWELL. Yes.

Mr. KEARNEY. First of all, everyone seems to agree that you have to put this in a business-oriented fashion if we are ever going to make any way here. The only way—and to be profit for the taxpayer—the only way that any business is ever profitable is if it's competitive and if you are going to saddle this new enterprise with a $9 billion debt—and we don't believe that there is any debt—but if you are going to saddle this enterprise with a $9 billion debt, it is not going to be competitive and therefore, it is not going to be profitable and therefore the Treasury is going to get zilch.

The second thing is about the allocation of costs had never seen anything that recognizes the fact that during the Carter Administration as a matter of policy and without being for or against it, it was decided that we would increase the amount of enriched uranium than we had far more in excess than it was necessary because it was the policy of the government to have that to encourage people—foreign people—not to build other facilities, not to have reprocessing plants but to come to the United States for their enriched uranium.

That is not something that should be charged to commercial customers.

Mr. FAWELL. So you're saying that's a good example of policy changes which—

Mr. KEARNEY. That's an example of policy that ends up being saddled on the commercial customer.

Mr. FAWELL. All right, Madam Chairman. I know our time is short, but I find it all very interesting—

Mrs. LLOYD. Well, the bells haven't begun ringing yet, so please proceed.

Mr. FAWELL. Well, I think I've pursued the point. Again, Mr. Kearney has repeated the point I said at the very outset, that we all—the idea is to make it competitive and I don't know yet in my own mind whether it's possible to do that, to get to a real competitive cost efficient operation without some kind of compromise and admission that we've done it so badly so far that even if we gave this to a private entity right now if any private entity would take it—if anybody would buy stock in it—that we wouldn't be able to operate it efficiently that kind of a burden financially on our backs.

That's what Mr. Kearney is saying and I suspect Mr. Badger would probably agree with that. I'm not sure yet, Mr. Mantange, whether you'd say good old private enterprise—free entrepreneurial spirit could rescue this tragic situation.

Mr. MONTANGE. Mr. Fawell, I have two points that I'd like to make on that. One is with respect to the EEI claim that this was all Mr. Carter's fault. I want to note that the utility industry consistently from the early 1970s until 1983, 1984, the utility industry consistently, publicly anyway, supported the construction of these new enrichment facilities.

They stated in 1974, "the economic penalties that could be imposed by a shortfall of enrichment capability far exceed the costs that would be associated with the temporary oversupply," and then again in 1978 which I believe was during the Carter Administration, the EEI made statements in favor of the gas centrifuge. It opposed a General Accounting Office suggestion that investment in that enrichment capacity be postponed, the EEI said "the need to proceed rapidly with the planned plant is urgent and cannot be overemphasized."

At the same hearings, they reiterated that they, not the taxpayer, would be paying for that investment. Now, a few years later, we understand that we the taxpayer are to bear the investment. Now, as to this unrecovered cost business or not, it's an interesting issue.

Our point is—our fundamental point isn't really on the unrecovered cost. That's just a marker of the amount of subsidy that the taxpayers have already supplied this enterprise. We're very concerned about the future. Under the current program and under the bills listed in the press release, these subsidies are going to continue.

We believe that the program should be restructured to "maximize profit" or if that's not possible at least minimize our loss.

Mr. FAWELL. But that does not necessarily mean full repayment of unrecovered costs.

Mr. MONTANGE. It may be commercially impossible unless Congress decides to pursue existing law which I reiterate under 161 (b) and (p) would permit the NRC and or DOE collectively to require U.S. utilities to use the domestic enrichment facility to a degree sufficient to comport to their commitment to pay for these costs of the investment program that they've publicly supported in the 1970 and early 1980s.

Mr. FAWELL. Fine. Any further comments, Mr. Badger?

Mr. BADGER. I would just like to comment on what NARUC has done on this so that there will be no misunderstanding. In 1987 when our committee really directed an inquiry into this matter, it was with legislation that was pending before you at that time. Now, at our meeting, we had DOE and we had the industry and we were struck by having—here was the agency DOE charged with the responsibility for operating this enterprise, effectively saying to us, it's broken.

We can't function under this kind of arrangement and we think it has disadvantages that may work to the disadvantage of rate payers if the process is continuing. I believe they characterize it as trying to put bandaids on a huge wound and they didn't know how long they could continue with this. So, we had the industry on one hand suggesting that a restructuring of this enterprise would be desirable and we had the very enterprise charged with it's operation saying it's not functioning and it was in that kind of environment that we examined this and indeed our resolution, if you notice, it has the words, should you determine that a private corporation or a government corporation would be more responsive, we support that and that's the thrust of ours.

Some of this is so technical as to what will happen, it is a matter of speculation. Obviously, we deal in rate setting everyday. I'm always reluctant to venture out of using historical data in trying to predict the future but I guess we were taken and we were taken by the fact that the agency themselves believes they can't function under the kind of environment with the appropriation process and the types of things that are involved in that appropriation process today.

That's why we believe it might require some favorable consideration.

Mr. FAWELL. Thank you very much, gentlemen.

Mr. KEARNEY. Excuse me. May I make a—

Mrs. LLOYD. Yes, go ahead.

Mr. KEARNEY. First of all, I want to make certain that there isn't a misunderstanding here. My reference to the Carter Administration was on the nonproliferation issue, not on GCEP which Mr. Montange interpreted my talking about. Yes, the electric utility industry did support GCEP because we—on the basis that it would reduce the cost of enrichment.

One of the major reasons was because of the decrease in the cost of electricity that would be required for that and we paid for that on the cash flow basis which was the intention of Congress. Now, DOE as a supplier seemed to have recognized that that was not a good management decision because they're written that off in their tabulation of this alleged unrecovered cost. And without trying to walk away from the fact that we did support it under those circum-

stances, it was a decision that had to be made by both the Congress and the Administration, so to put all of the blame back on the utility industry because it supported it I think is a little unfair.

Mrs. LLOYD. Thank you very much. I want to thank you gentlemen for being here today. Again, we will be sending you questions that we'd like you to respond to for the record because we do want this to be a complete hearing and a well- balanced hearing. We have received two statements for the record in this hearing, one by Mr. Harold Seidman, National Academy of Public Administration, another one from Portland General Electric Company. Without objection, these will also be made a part of the record.

[The prepared statements of Harold Seidman, and the Portland General Electric Co. follow:]

STATEMENT OF

HAROLD SEIDMAN

National Academy of Public Administration

Before The

SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMEMT
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
HOUSE OF REPRESENTATIVES

on the

ORGANIZATION OF THE URANIUM ENRICHMENT PROGRAM

October 6, 1988

Mr. Chairman and Members of the Subcommittee:

My name is Harold Seidman. I am currently a guest scholar at the Center for the Study of American Government, The Johns Hopkins University, and a fellow of the National Academy of Public Administration. As government corporation specialist and later Assistant Director for Management and Organization of the Bureau of the Budget, I was responsible for implementing the Government Corporation Control Act of 1945 and advising the President and the Budget Director on the organization, management and financing of government corporations. I have also been a consultant to the United Nations, Economic Commission for Africa, and governments in Europe, Asia, Africa and South America on public enterprise organization and Management.

The National Academy of Public Administration is a nonpartisan organization formed in 1967 to advance the effectiveness of public management through advice and counsel to all levels of government. In 1984 the Academy was chartered by Act of Congress, the first such charter granted by Congress since the charter for the National of Sciences in 1863.

I am pleased to accept your subcommittee's invitation to discuss generally the concept of the government corporation and specifically the proposal to restructure the Department of Energy's uranium enrichment program as a government corporation. The views presented here are my own and not necessarily those of the National Academy.

The government corporation as we now know it evolved as a pragmatic response to the need to devise an institution capable of administering effectively new types of government programs first undertaken in World War I and since greatly expanded. To accomplish its wartime objectives, the government was confronted with the task of managing a number of commercial enterprises including construction and operation of a merchant fleet, rental and sale of houses, purchase and sale of sugar and grain, and various lending and insurance programs. These public enterprises had certain unique characteristics which clearly distinguished them from traditional government functions which do not involve a buyer-seller relationship: (1) the government was dealing with the public as an entrepreneur rather than as a sovereign; (2) users, rather than the general taxpayer, were expected to pay the costs of goods and services; and (3) expenditures and revenues necessarily fluctuated with consumer demand and flexibility was essential if such enterprises were to be able to respond to the dictates of the market.

Experience demonstrated that enterprises with such characteristics could not function effectively under administrative and financial control systems designed for totally different types of government activities. Enterprises could not be expected to operate as a business and respond to market forces if expenditures were limited to amounts provided by annual appropriations and all revenues had to be turned over to the Treasury. Governmental accounting and

auditing systems had the limited purposes of preventing the over-obligation of appropriated funds and unlawful expenditures, and did not provide the information necessary to establish rates and prices, determine income, expenses, and profit or loss, and evaluate results. Governmental accounting, for example, would not normally include such costs as depreciation and interest on the government's investment and accounts were maintained on a cash rather than an accrual basis. Furthermore, traditional government agencies were often hamstrung by a myriad of regulatory and prescriptive statutes in such areas as purchasing, sale of goods and property, and personnel.

Sporadic attempts by the Comptroller General and Congress to apply standard budget and audit controls made it difficult for enterprises to function efficiently without providing accountability. When it enacted the Government Corporation Control Act of 1945 (31 U.S.C.#9101 et seq.), Congress recognized both the need for a special type of government institution tailored to the requirements of business programs and for special types of controls over such institutions which would assure accountability to Congress and the President without impairing essential flexibility. Congress expressly noted that "the corporate form loses much of its peculiar value without reasonable autonomy in its day-to-day decisions and operations."

Under the provisions of the Control Act, wholly owned government corporations are required to submit an annual "business type" budget to the president and Congress and are subject to a "commercial-type" audit by the Comptroller General. Congress is authorized to limit the use of corporate funds for any purpose, but it has rarely chosen to do so, except for administrative expenses. In reviewing business-type budgets, Congress has before it information on both revenues and expenditures. Mixed-ownership government corporations are exempted from the budget provisions of the Control Act.

The Control Act also directed that any government corporation chartered under the laws of the District of Columbia, a state or a territory be liquidated and that in the future no corporation be created or acquired for the purpose of acting as an agency and instrumentality of the United States, except pursuant to an act of Congress specifically authorizing such action.

The Government Corporation Control Act is not a general incorporation law. There is no comprehensive federal law dealing with the powers, organization structure, and legal status of government corporations. Corporations possess only those powers which Congress has seen fit to include in their enabling acts. In its 1981 report to the Office of Management and Budget on government corporations, the National Academy of Public Administration recommended that such corporations generally be given the power to sue and be sued in their corporate name; to retain and utilize revenues; to determine the character and necessity of expenditures and manner in which incurred, allowed and paid, subject only to laws specifically applicable to government corporations; and to enter into contracts and acquire and dispose of property. Comparable provisions are normally to be found in corporation charters. Corporations also may be given authority to borrow from the Treasury, the Federal Financing Bank or the public, and they may be exempted from some or all of the civil service laws and regulations.

It should be emphasized that government corporations are organized to achieve a public purpose authorized by law. Incorporation does not cause an agency to lose its public character. The Supreme Court, in the case of Cherry Cotton Mills vs. U.S. (327 U.S. 536 [1945], held that Congress' choice to call the Reconstruction Finance Corporation a corporation "... does not alter its characteristics so as to make it something other than what it actually is, an agency selected by the government to accomplish purely governmental

purposes." The government corporation is nothing more than a different way of carrying on the public's business.

The wholly owned government corporation should not be confused with mixed-ownership government corporations and so-called government-sponsored enterprises, such as the Synthetic Fuels Corporation, which are defined in law as not being agencies or instrumentalities of the United States. Mixed-ownership corporations and government-sponsored enterprises, because of their ambiguous legal status, do continue to present serious problems of accountability. Mixed-ownership corporations tend to be private when it comes to distributing profits but public when it comes to sharing losses. The designation of government organized, financed, and controlled entities as "non-government" is misleading and poses a number of unresolved ethical, legal and constitutional questions.

The government corporation has been adopted throughout the world as the most effective form of organization for public enterprises. President Truman prescribed the criteria for the use of government corporations in his 1948 budget message when he stated:

> Experience indicates that the corporate form of organization is peculiarly adapted to the administration of government programs which are predominately of a commercial character — those which are revenue producing, are at least potentially self-sustaining, and involve a large number of business-type transactions with the public.

These criteria were reaffirmed by the first Hoover Commission and remain valid today.

There is no doubt that the Department of Energy's uranium enrichment program fully meets the prescribed criteria for use of a government corporation. Yet the program has been denied the operating and financial flexibility accorded federal business enterprises organized as government corporations and consequently has been seriously handicapped in maintaining the United States'

competitive position in the world markets. Bringing the program under those systems of government financing, budgeting, accounting and auditing designed for comparable government enterprises would make possible substantial improvements in current performance and at the same time provide for more effective accountability to Congress.

The program is now compelled to maintain two systems of accounts -- one for developing budgetary information for Congress and the other for developing business-type financial statements. The program is financed by an annual appropriation and revenues are paid into the Treasury. Arbitrary budgetary limitations deprive the program of the flexibility essential for making sound and realistic business decisions. Unless the program is restructured to provide appropriate operating and financial flexibility, it is doubtful that it will be able to maintain its present market position and demonstrate its future viability.

It is important that we look to the future, not to the past. If a corporation is created, the government's equity, on which the corporation would be expected to earn a return, should be determined by fair market value of the assets transferred to the corporation, not by the amounts previously appropriated for the uranium enrichment program. Transfer of assets at depreciated book value, as provided by H.R.4489, H.R.4934, and H.R.4975, does not provide a realistic measure of their current earning potential. Presumably the government has obtained the benefits of its past investments in the program.

In supporting Title III of H.R.4489, Title II of H.R.4934 and H.R.4975 providing for the establishment of the United States Enrichment Corporation, I am not arguing for special treatment. On the contrary, I am arguing for equal treatment -- equal to that granted most other federal business enterprises which are administered as government corporations.

TESTIMONY OF PORTLAND GENERAL ELECTRIC COMPANY

BEFORE THE HOUSE SUBCOMMITTEE ON

ENERGY RESEARCH AND DEVELOPMENT

OF THE HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

ON H.R. 4975

For additional information,
please contact:
Chris Rusch (503) 226-8420
Jill Eiland (503) 226-8922

INTRODUCTION

Portland General Electric Company (PGE) is a regulated electric utility that generates, buys, transmits, distributes, and sells electricity to a 3,170-square-mile area in northwestern Oregon, as well as to wholesale markets. It serves some 545,000 customers, 44 percent of the electric customers in the state. PGE is a wholly owned subsidiary of Portland General Corporation. The Company is the major owner and operator of the 1,130 MW(e) Trojan Nuclear Generating Station which began commercial operation in 1976. As a past and future uranium consumer, PGE has direct interest in H.R. 4975 and hereby provides specific comments regarding the uranium industry subsidy and the use of uranium and enrichment tails materials.

URANIUM INDUSTRY SUBSIDY

PGE is opposed to the uranium industry subsidy contained in Section 112(d) of H.R. 4975. The following points are provided for your consideration.

Between 1972-1985, PGE purchased 5.42 million pounds of uranium. Of this total, 79 percent was domestic uranium. In 1989, two new uranium supply contracts, one domestic and one foreign, will begin supplying uranium with the domestic contract representing up to 50 percent of the total supply. PGE has provided and is continuing to provide real support to the domestic uranium

industry and feels no additional responsibility to subsidize that industry. In addition, U.S. utilities which have purchased foreign uranium should not be required to participate in the uranium mill tailings cleanup since foreign uranium mining operations are not regulated by the U.S. government.

All electrical consumers benefit from the utilization of the lowest cost uranium resources purchased through an unrestricted market. While H.R. 4975 would allow the use of foreign uranium, the $750 million subsidy will create an artificial demand for domestic uranium which will in turn tend to increase market prices resulting in higher generating costs. While the relatively small (2,120 employees according to DOE/EIA-0478-86) domestic uranium industry benefits, electrical consumers pay for the subsidy.

Under Section 118(b), the Department of Energy (DOE) would be required to <u>waste</u> the domestic uranium that it purchases through H.R. 4975. The quantity of uranium fed into an enrichment plant is a function of plant operation and can vary considerably. Since all DOE enrichment customers supply uranium to DOE for enrichment, DOE will have to inventory the uranium that would be purchased under H.R. 4975 or "over feed" the enrichment plants. The plants will be operated in a less than efficient manner solely to use the uranium. Purchasing and using domestic uranium in either way is wasting a natural resource.

Considerable testimony has been given in the past, most recently on August 10, 1988 during other hearings on H.R. 4975, concerning the national security aspects of uranium supply. From PGE's perspective, the supply of uranium for use in civilian reactors is not a national security issue because abundant supplies are available from secure foreign nations, eg, Australia and Canada. If the U.S. government determines that domestic uranium supply is absolutely necessary for defense purposes, then the Department of Defense should support and subsidize the domestic uranium industry.

The U.S. has significant uranium reserves, although the reserves are relatively high cost compared to most foreign reserves. The use of the lower cost foreign uranium, if anything, enhances national security since the domestic uranium resource is preserved. In addition, of the major foreign uranium producing nations (Australia, Canada, Gabon, Namibia, Niger, and South Africa) only Canada and South Africa have domestic nuclear programs. Those programs require a small fraction of the uranium produced in those countries. Therefore, utilizing foreign uranium does not deplete a resource that would otherwise be used in those countries.

H.R. 4975 does not assist the uranium industry in terms of supporting the labor force or developing new mines. The legislation would simply purchase uranium from existing companies. Edward R. Farley, speaking in behalf of Atlas Corporation which

has mined uranium in the U.S. since the early 1950's, made the following statement at the August 10, 1988 hearings regarding H.R. 4975.

> "By repealing section 161(v) (of the Atomic Energy Act) the three bills (H.R. 4489, 4934 and 4975) repeal the current federal policy that the viability of the domestic uranium industry must be assured. The substitutes for this assurance which they offer will not lead to a viable industry. Put bluntly, the bills thus do not help, and they instead hurt."

In every year from the beginning of the commercial nuclear power industry through 1984, more uranium was produced than consumed in the world outside communist areas (WOCA) creating a uranium inventory in 1984 equal to approximately five years forward demand. For the last three years, consumption has exceeded production such that the current WOCA utility inventory represents approximately four years forward demand. Therefore, Mr. Farley's conclusion of harm to the domestic industry is probably based on the fact that the $750 million used to purchase domestic uranium will only cause inventories to increase and further delay the reduction of the uranium inventory to desired levels. Real new demand for uranium will only be generated when this uranium inventory is reduced. In that same testimony, Mr. Farley further states that H.R. 4975 will not put uranium miners back to work.

H.R. 4975 does not benefit the utility industry. Put another way, what does PGE receive in exchange for the $8 million (approximate) that DOE will collect from PGE if this legislation is passed? In short, H.R. 4975 offers the utilities little, if anything. Under this proposal, the DOE enrichment program will be restructured supposedly to allow DOE to compete in the supply of enrichment services. Regardless of the organization structure, DOE must continue to control costs and cut prices if it is to compete in the enrichment market. Market forces will make DOE competitive, not H.R. 4975.

In addition, H.R. 4975 repeals Section 161v of the Atomic Energy Act, which results in the ability to enrich foreign uranium without the threat of government restrictions on such enrichment activity. A rulemaking dated October 10, 1974 revised the uranium enrichment criteria as they apply to Section 161v such that a utility could use up to 100 percent foreign uranium beginning January 1, 1984. Therefore, H.R. 4975 merely formalizes a rulemaking completed 14 years ago.

Dana Trier, Tax Legislative Counsel, Department of Treasury, made the following statement during the August 10, 1988 hearings on H.R. 4975:

> "From a tax policy perspective, the most attractive feature of the Act (H.R. 4975) is that the proposed Uranium Fund would be funded by what might be appropriately termed 'user fees,' rather than taxes levied on the general public."
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> 5

PGE rejects this definition. H.R. 4975 would tax nuclear utilities and their ratepayers for the explicit purpose of subsidizing the domestic uranium industry. The term "user fee" implies that a fee is paid for the use of goods or for the receipt of services. H.R. 4975 provides neither goods nor services to nuclear utilities.

During the 100th Congress, major trade legislation was enacted. While that legislation was still being considered individually by both Houses of Congress, the Senate rejected a measure that would have prevented foreign oil imports from exceeding 50 percent of U.S. consumption and thereby rejected a major subsidy to the domestic oil industry in the form of a guaranteed market share. If the U.S. government is unwilling to subsidize the domestic oil industry, which dwarfs the size and importance of the domestic uranium industry by any measure, why should the same government subsidize the domestic uranium industry? Both uranium and oil are energy sources with the same basic problem; domestic reserves cost more to mine/drill than purchasing foreign supplies.

Finally, the domestic uranium industry is being supported, in part, by foreign utilities. The areas of the world outside of the United States with major nuclear electrical generating programs include western Europe, Japan, and South Korea. These areas have little or no indigenous uranium reserves; therefore, diversification of supply is a major procurement objective. In

order to satisfy this objective, uranium is purchased from uranium suppliers in politically secure countries, including the United States. The domestic uranium suppliers currently have uranium supply contracts with utilities in France, Japan, Switzerland, West Germany, and the United Kingdom. Further, new contracts are currently being negotiated for supplying more uranium to Japan. Therefore, support of the domestic uranium industry comes from both domestic and foreign utility purchases.

USE OF URANIUM AND ENRICHMENT TAILS MATERIAL

PGE is opposed to Section 118(c) of H.R. 4975. This section contains a particularly restrictive measure that could affect the use of a potentially significant national energy resource. The present process used by DOE to enrich uranium is based on the gaseous diffusion technology. The process produces an enriched uranium product and a waste (or "tails") material. Since utilities supply the uranium for the enrichment process, the uranium contained in the product and tails material is a utility-supplied component. Due to inefficiencies of the process, the tails stream contains usable quantities of U-235 (the uranium isotope which fuels light-water reactors). The utilities usually transfer title of the tails material to DOE when the associated enriched uranium product is delivered, since there is currently no use for the tails material. DOE has been enriching uranium for foreign and domestic utilities for many years. Consequently, there is a considerable quantity of tails material stored at DOE.

DOE is developing a new enrichment process which is based on the use of lasers (AVLIS technology). The AVLIS technology is more efficient than gaseous diffusion, and the tails material stored at DOE could be used to feed an AVLIS enrichment plant.

Section 118(c) prohibits the use of tails material "in such a manner as to decrease the demand for natural uranium by United States utilities in comparison to the demand that would exist in the absence of such use or recycling." The result is that a significant uranium resource which the utilities and ratepayers have already purchased could not be used if the AVLIS technology is deployed. Section 118(C) does permit the use of the tails material for military purposes or for DOE working stock/ inventory; however, these uses are minor compared to utility demand.

We appreciate this opportunity to provide our comments.

CAR/jw
T-2337i

Mrs. LLOYD. At this time, I would like to pay tribute to Dr. Jack Dugan who is not here unfortunately, who has been our staff director since I've been the Chairman of this Subcommittee. Jack is leaving us at the end of this month. All of us respect Jack. We will miss him and I'd like to acknowledge the contributions that he has made to the hearings of this Subcommittee.

I do think that we have good staff on both side of the aisle. We try to be as nonpartisan, as objective as we can on this Committee. I think that's the way that good Committees need to operate and I appreciate that in our Committee structure and I do want to express my appreciation, not only to Jack Dugan, but for all of the staff on both sides and I'm sure that Mr. Fawell agrees with me.

I also want to express my appreciation to all of the Members on both sides of the aisle of this Subcommittee. We try to work together in harmony and we don't let our political persuasion try to stand in the way of introducing and supporting legislation which we feel is in the best interest of not only our country but certainly the industries that you represent. This does conclude our hearings for today. I look forward to a healthy session next year but this is our last hearing for this Congress and if there's no further statements, this Subcommittee stands adjourned. Thank you.

[Whereupon, at 11:30 p.m., the Subcommittee adjourned to reconvene at the call of the Chair.]

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APPENDIX

COMMISSIONERS
FRANK O. HEINTZ
CHAIRMAN
WILLIAM A. BADGER
LILO K. SCHIFTER
CLAUDE M. LIGON
LINDA M. THOMAS

STATE OF MARYLAND

PUBLIC SERVICE COMMISSION

231 E. BALTIMORE STREET
BALTIMORE, MARYLAND 21202-3486
(301) 333-6000
TTY FOR DEAF: 1-800-345-6934

BRYAN G. MOORHOUSE
GENERAL COUNSEL
RONALD E. HAWKINS
EXECUTIVE SECRETARY
MICHAEL J. SCIBINICO
EXECUTIVE DIRECTOR

December 2, 1988

Honorable Marilyn Lloyd, Chairman
United States House of Representatives
Subcommittee on Energy
Research and Development
B-374 Rayburn House Office Building
Washington, D. C. 20515

Attention: Kathryn Holmes

Dear Congresswoman Lloyd:

In accordance with your request, I am enclosing for your information and review responses to additional questions raised by the Subcommittee members during the October 6, 1988 hearing on Uranium Enrichment and Supply.

Very truly yours,

William A. Badger
Commissioner

Enclosure

COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
U. S. HOUSE OF REPRESENTATIVES

Responses to

Additional Questions for
Hearing on Uranium Enrichment Legislation
Date: October 6, 1988
as provided by

William A. Badger
Commissioner, Maryland Public Service Commission and
Chairman, NARUC, Committee on Electricity

Q. **On page 4 of your testimony you mention your opposition to any retroactive recovery of payments on the "debt" in the program. Some share your views on this issue and would characterize the "debt" more as an unrecovered return on investment than a debt. Do you have any comment on this?**

A. It is the position of NARUC that there is no unrecovered debt associated with the Department of Energy uranium enrichment enterprise. As was indicated in the NARUC Resolution on Nuclear Enrichment Services adopted by the Executive Committee on July 22, 1987, the principle of unrecovered costs was never contemplated and represents a substantial departure from the approach by which appropriations and revenues have funded enrichment activities.

Similarly NARUC is unable to accept the proposition that several billions of dollars be characterized as "unrecovered investment." This term, we believe, incorrectly suggests there is a legal or equitable responsibility to recover some obligation. As we indicated in our testimony, NARUC is unable to identify any provision of the Atomic Energy Act requiring payments by commercial customers to the U. S. Treasury.

Q. **On page 5 of your testimony, you mention the utility industries comment that the net outcome of forming a corporation and subsidizing the uranium industry is cost-neutral for electric ratepayers. Public Service Electric and Gas Company just testified that the apparent costs of the legislative proposals are obviously firm, yet the benefits to be accrued which would offset these costs are more speculative in nature. Would you agree with this assessment?**

A. In general, NARUC would agree with the observation that it will be difficult to quantify the benefits of the proposed legislation to electric ratepayers. There are, however, intangible benefits to restructuring which would provide stability to the enrichment component of nuclear fuel supply through the exercise of a competitive market. We would respectfully suggest that the question of unrecovered "debt" or "investment" continues to cloud this issue and thus produces market uncertainties for DOE.

Q. **On page 2 of your testimony you advocate free trade policies with respect to the supply of enrichment services. Does this mean that you oppose any provision of law which would require domestic utility to purchase enrichment services from the Department of Energy?**

A. NARUC cannot support a proposal that would implement artificial trade or usage restrictions since it would adversely affect the ability of a government corporation to compete in the international market place. To impose such a purchase requirement would provide no incentive to control costs and thus may serve to increase the price of electricity.

Q. **You mention the $1.75 billion uranium revitalization fund on page 4 of your testimony. Would you characterize this as a subsidy to the uranium industry at the expense, at least in part, to the electric utility ratepayers?**

A. Yes, the Uranium Revitalization Fund was addressed by NARUC's Committee on Electricity at its November, 1988 meeting. It is the position of the Committee on Electricity that electricity customers are not responsible for nor should they be required to participate in cost sharing arrangements for tailings reclamation for the 26 active domestic uranium sites not included in the Uranium Mill Tailings Radiation Control Act of 1978. This position was adopted by NARUC's Executive Committee and I was authorized to communicate this position to the Subcommittee on Energy Research and Development.

Q. **Assuming that national defense requirements for enriched uranium can be met through scaled-back government operation of the existing diffusion plants, do you believe that survival of the U.S. uranium enrichment enterprise to supply commercial enrichment services is necessary, and if so, why?**

A. It is NARUC's understanding that the uncommitted non-United States, free-world supply of enrichment services is inadequate to meet the requirements of the entire enrichment market. For this reason, survival of the U.S. enrichment enterprise is essential for the immediate future. While it is likely that other suppliers would meet the demands of the marketplace once it was identified, it would seem advisable that a continuation of the U.S. enrichment enterprise would serve to promote rather that diminish competition.

Q. **Would you also support legislation which would privatize the U. S. Uranium Enrichment Enterprise, and if not, why not?**

A. NARUC has not addressed the issue of complete privatization of the U. S. Uranium Enrichment enterprise although some view the establishment of a government corporation as a step in that direction. It is my view that NARUC would likely support eventual privatization legislation so long as it could be demonstrated that the result was a more competitive world market with lower over-all nuclear fuel costs to electricity customers.

PSE&G Public Service Electric and Gas Company

80 Park Plaza, Newark, NJ 07101 / 201 430-7000 MAILING ADDRESS / P.O. Box 570, Newark, NJ 07101

November 21, 1988

Ms. Kathryn Holmes
Subcommittee on Energy Research
and Development
US House of Representatives
B-374 Rayburn House Office Building
Washington, DC 20515

Dear Ms. Holmes:

Attached are my responses to the questions from my testimony given to the Subcommittee on October 6, 1988.

If you need any further information, you may contact me at (201) 430-6814.

Very truly yours,

Richard J. Gennone
vck

Richard J. Gennone
Manager - Nuclear
Fuel Supply

/vck
Attachments

COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

ADDITIONAL QUESTIONS FOR
Hearing on Uranium Enrichment Legislation
Dated: October 6, 1988
for

Richard J. Gennone
Manager--Nuclear Fuel Supply
for the Public Service Electric and Gas Company

-- On page 3 of your testimony you state that you agree that the uranium industry should be helped, yet two paragraphs earlier on page 3 you said you support free trade in uranium. How is it possible to do both?

-- You mention the debt issue on page 4 of your testimony. This is a subject that has much confusion associated with it. Some have characterized this issue more in terms of the government never having received a fair return on its business investment. As a result, some have added up the interest and designated the difference between what had be returned to the Treasury and what was supposed to have been returned to the Treasury as a debt. Is this appropriate?

-- On page 4 of your testimony you mention that the enrichment enterprise must be made more flexible. In what way is the enterprise not as flexible as you would recommend?

ADDITIONAL QUESTIONS

Q. **On page 3 of your testimony you state that you agree that the uranium industry should be helped, yet two paragraphs earlier on page 3 you said you support free trade in uranium. How is it possible to do both?**

A. PSE&G supports free trade in the interests of our rate payers as it would allow us to make the best business arrangements possible in a competitive market. Assurance of supply considerations, as well as costs, would be weighed in allowing PSE&G to make prudent uranium purchase decisions. Protectionist measures do not work in the long term and only increase the cost to the consumers. The uranium industry could be helped in other ways, such as assisting with mill tailings cleanup, rather than across the board surcharges which subsidize the industry and would have the additional impact of raising market prices which would further expose utilities to additional price increases.

The United States is not endowed with huge world class deposits of uranium. Accordingly, it is foolish to contemplate a world class supply industry from the current deposits operating in the United States. US utilities, due to extreme regulation of rates and current deregulation of territories are extremely sensitive to costs of generation. We must therefore purchase materials at the lowest cost possible.

European and Far East utilities have historically paid higher prices for U308 and could be good potential buyers for efficient US producers. A possible tie in of U308 sales to off shore customers coupled with an enrichment contract could help both the US industry and the enrichment enterprise. A method to tie in uranium purchases with enrichment services to offshore customers should be investigated.

Q. **You mention the debt issue on page 4 of your testimony. This is a subject that has much confusion associated with it. Some have characterized this issue more in terms of the government never having received a fair return on its business investment. As a result, some have added up the interest and designated the difference between what had be returned to the Treasury and what was supposed to have been returned to the Treasury as a debt. Is this appropriate?**

A. PSE&G supports the Edison Electric Institute position that there is no debt owed by the enrichment enterprise for the following reasons:

1. Utilities have paid for enrichment services since 1969 at prices which were calculated on a cost recovery basis for the Government enrichment enterprise, with Congressional approval of the prices DOE charged customers annually.

2. The building of the enrichment facilities by the Government was not motivated by business reasons but for national defense purposes. All costs associated with servicing the commercial enrichment sector were considered when setting the annual enrichment prices to utilities. These prices have always been paid in full by utilities for the DOE services rendered.

3. Nothing in the legislative history or the Atomic Energy Act of 1954, as amended, requires the enrichment enterprise to make specific payments to the U.S. Treasury.

4. It is argued that the non recovery of the government cost of building the facilities amounts to a subsidy to the nuclear industry and nuclear rate payers at the expense of the taxpayer. With today's utility distribution and interconnections, it will be difficult to separate rate payers from taxpayers.

5. The enrichment enterprise belongs to the United States citizens and those who choose to use it's services should pay for the service. The facilities are built and have been paid for by United States taxpayers and rate payers.

Q. On page 4 of your testimony you mention that the enrichment enterprise must be made more flexible. In what way is the enterprise not as flexible as you would recommend?

A. Without changing DOE's cost recovery requirements, DOE needs to have additional flexibility in running its operation. The annual budget review procedure with Congress hampers DOE's ability to operate as a business. Each enrichment customer's needs are different, yet DOE is locked into specific contracting requirements. Additional contracting flexibility with DOE's terms and conditions should be considered so the needs of their customers and the marketplace could be met. In regards to pricing, customers with the same terms and conditions should be treated equally.

DOE negotiators should have the flexibility to price services to utilities based on what it costs to service. If a utility wants short notice, short lead time, etc., DOE should be able to charge more. Those utilities requesting long lead times and notices which allow DOE to produce in off peak periods should pay less.

SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT

Hearing on Establishing a Uranium Enrichment Corporation

October 6, 1988

Questions for the Record by Republican Members

RICHARD J. GENNONE, MANAGER - NUCLEAR FUEL SUPPLY
PUBLIC SERVICE ELECTRIC AND GAS COMPANY

1. On page 2 of your testimony, you state that "PSE&G will support legislation which would...mitigate the current uranium industry problems." However, you do oppose the provisions included in the bills before us today. What alternatives would you suggest?

2. Does PSG&E purchase all of its enriched uranium from the U.S. enrichment enterprise? If not, what percentage is for foreign enrichment services?

3. Do you believe that maintenance of the U.S. enrichment enterprise is essential for the PSG&E, or would you be just as happy if all your uranium enrichment purchases were from foreign sources as long as the price was reasonable?

4. Do you believe that establishment of the Uranium Enrichment Corporation, as proposed in the bills before us, is essential to the future of U.S. uranium enrichment enterprise?

5. Do you believe it is realistic to privatize the U.S. uranium enrichment enterprise? Is that the long-term solution?

QUESTIONS FOR THE RECORD

Q. **On page 2 of your testimony, you state that "PSE&G will support legislation which would...mitigate the current uranium industry problems." However, you do oppose the provisions included in the bills before us today. What alternatives would you suggest.?**

A. PSE&G has always supported separating the uranium and enrichment problems into separate issues. Each could be handled individually. Making the necessary changes which would let the enrichment enterprise operate in a competitive manner is required. Helping the uranium cleanup of tailings may receive some support from the utility industry as well. Any legislative initiative that requires all utilities to subsidize the US uranium industry with substantial sums of money, raising utility customers rates, will not be supported.

Q. **Does PSE&G purchase all of its enriched uranium from the US enrichment enterprise? If not, what percentage is for foreign enrichment services?**

A. PSE&G presently purchases 100% of our enriched uranium from the US DOE.

Q. Do you believe that maintenance of the US enrichment enterprise is essential for the PSE&G, or would you be just as happy if all your uranium enrichment purchases were from foreign sources as long as the price was reasonable?

A. PSE&G supports the need for a strong, competitive, US enrichment enterprise. DOE's past record of service and assurance of supply is excellent and DOE is regarded as a competent supplier to US utilities. However, DOE's price competitiveness in the past has caused the utilities to seek alternate sources of supply. This trend could continue in the future if certain areas of current concern (DOE debt issue, funding process, etc) are not rectified.

Q. Do you believe that establishment of the Uranium Enrichment Corporation, as proposed in the bills before us, is essential to the future of US uranium enrichment enterprise?

A. A complete restructuring of the US enrichment enterprise may be desirable but may not be necessary. If the current management at DOE was given more latitude in making business decisions, the fiscal year budgeting process changed and DOE allowed more contracting flexibility, improved results would be expected.

Q. Do you believe it is realistic to privatize the US uranium enrichment enterprise? Is that the long-term solution?

A. Privatization of the enrichment enterprise may be possible, but certainly not with any "outstanding debt" to be repaid to Treasury. The long range solution to the enrichment enterprise problems could be helped by privatization or any other change that is made to allow it to be run more like a business and remain competitive and responsive to the marketplace.

Resolution of the debt issue, active participation between the utilities and DOE, and continued reduction in overhead costs will make the enterprise competitive. Making enrichment private does not in itself make it cost competitive.

JOHN J. KEARNEY, Senior Vice President

EDISON ELECTRIC INSTITUTE The association of electric companies

1111 19th Street, N.W.
Washington, D.C. 20036-3691
Tel. (202) 778-6400

NOV 17 1988

November 15, 1988

The Honorable Marilyn Lloyd
Chairman, Subcommittee on Energy
Research and Development
Committee on Science, Space, and
Technology
U.S. House of Representatives
Washington, D. C. 20515

Dear Chairman Lloyd:

As you requested in your letter of October 21, I have responded to the supplemental questions provided by the members of the Subcommittee. I have prepared these answers as addenda to the record of the hearing of October 6, 1988 before the Subcommittee on Energy Research and Development. My responses are enclosed with this letter, as are my comments on the hearing transcript. I have suggested several changes to the transcript for the sake of clarity. These modifications do not result in any substantive change to my statement or my responses to questions asked of me during the hearings.

Edison Electric Institute and the American Nuclear Energy Council appreciate your interest in the subject of domestic enrichment. We consider this issue to be very important, and stand ready to work with you and the Congress to assure that appropriate steps are taken to maintain and enhance this valuable national resource.

If I can answer any further questions or be of help in any way, please feel free to contact me.

Sincerely yours,

John J. Kearney

JJK:wmj
Enclosures

COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
U.S. HOUSE OF REPRESENTATIVES

Answers to

Additional Questions for
Hearing on Uranium Enrichment Legislation
Date: October 6, 1988
as provided by

John J. Kearney
Senior Vice President, Edison Electric Institute

Q. On Page 2 of your testimony you mention that H.R. 4975 is a package and that the uranium subsidy provisions should not be considered separately. Do you also oppose separate consideration of that part of the bill performing the enrichment corporation?

A. The electric utility industry considers the federal Government's enrichment enterprise to be of major importance, and we view the restructuring of that enterprise to be the best option for its future survival. Comprehensive uranium legislation, the proposals of S. 2097, H.R. 4489, and H.R. 4975, provided mechanisms that, in our view, would move the enterprise in the right direction, implementing a more business-like and therefore more effective organization. However, they included proposals beneficial to the uranium mining industry in addition to addressing the uranium enrichment program. The electric utilities acquiesced to paying the costs associated with the non-enrichment titles of these proposals in order to obtain the very important benefits that will come with the restructuring of the enrichment enterprise. The industry would be willing to consider any proposals that address the enrichment enterprise and its problems separately from those of the uranium mining industry.

Q. At the bottom of page 2 and the top of page 3 you remark that restructuring the enrichment enterprise will bring market stability in the business. If there is not market stability today, why should there be market stability under a federal corporation?

A. As DOE's commercial enrichment enterprise is currently organized, it is unable to respond quickly to market forces and can not sufficiently recognize the special requirements of its customers. Accusations of the existence of a "debt" and budgetary policies which cause inventory drawdown at a time when low-cost power is available for low-cost SWUs, point to DOE's apparent inability to operate the enrichment enterprise like a business and indicate a failure by some groups to consider the long-term survival of the entity. This behavior leads to unpredictability of DOE's future prices and policies. Saddled with high prices, inflexible service arrangements, and slow response to market conditions, DOE lost most of its overseas market and about 10 percent of its domestic market. Even today, the Department's SWUs are priced significantly higher than its overseas competitors--despite the fact that DOE's factory cost of SWU production is estimated to be about three-quarters of its competitors' costs. Without positive action on the Government's part, this situation will continue to erode.

This state of affairs has moved some of DOE's domestic customers to notify the Department of their intention to terminate their enrichment contracts for 1996-1998. Congress must act to stabilize this situation quickly, otherwise an important national asset will be wasted as utilities purchase more and more enrichment overseas. We believe that a well-run, business-like enterprise--free from restrictive annual governmental budgeting--will do much to promote market stability and lower prices to consumers.

Q. **On page 3 of your testimony you note that the only way to stop DOE's customers from seeking competitive foreign enrichment services is for the Congress to restructure the enrichment enterprise. Are you suggesting that the legislation require DOE's customers to purchase from DOE? If not, what "effective way to stop this erosion" are you referring to?**

A. We would not support legislation that deprived utilities of the ability to obtain enrichment or any other services in an open and free market. It is our opinion that the best apparent way to make DOE's program competitive with foreign enrichment is to improve the operation of the enterprise and make it a customer-responsive supplier, thereby removing the desire of customers to make supplier changes. This is the best way the enterprise--or any domestic business for that

matter--can retain its traditional market share. Legislating a domestic monopoly to protect an enrichment enterprise that provides inflexible and over-priced services would very quickly translate to higher energy prices to businesses and families all over the country. This would deprive American industry of economical nuclear-generated electric power and drive their costs higher at a time when they are struggling to retain their existing markets and expand into new ones.

Q. **On page 4 of your testimony you state that following the "business as usual" path will result in continue loss of market share for DOE. Can you be more specific and point to the factors that are causing loss of market share within the Department of Energy?**

A. DOE's enrichment enterprise suffers from the inability to price in accord with market conditions and to price strategically to attract customers for the long-term. It is subject to governmental policies which are inconsistent with good business practices. "Business as usual" implies the continued restraint under the current policies which are aimed at using the enterprise as a source of revenue to help balance the federal budget. The DOE enrichment enterprise is unlike most services provided by the Government in that it charges it's customers fully for services rendered. So restraining this enterprise under Gramm-Rudman-Hollings constraints makes no sense and may cost DOE future sales. Such polices and those already mentioned above, such as the mythical debt, are leaving customers confused about DOE's future. Restructuring into a business-like corporation is the best answer to settle future uncertainty.

Q. **On page 6 of your testimony you state that unless the enrichment enterprise is restructured, the funds and efforts expended on AVLIS research will have been wasted. What leads you to the conclusion that under the Department of Energy the AVLIS program will be a waste of money but under the federal corporation it will not?**

A. As the DOE enterprise continues to lose market share, it will have less revenue available for research and capital expenditure. As a result, it will become increasingly difficult for DOE to justify moving forward with AVLIS deployment and equally difficult for Congress to authorize

the funding that such implementation would require. Moreover, should present trends continue, the DOE enterprise may be forced to withdraw from the market altogether. Without an established organizational mechanism in place to build and operate an AVLIS plant--and continue to pay for it through customer revenue--commercial realization will be impossible unless the program is subsidized to the tune of several billions of dollars by the taxpayers. A strong, competitive enrichment enterprise--a restructured enrichment enterprise--will be able to financially support AVLIS research, development, and implementation.

Q. **On page 7 of your testimony you refer to an analysis that indicates lower cost enrichment services could be achieved by the construction of a completely new and independent enrichment plant in the United States using European technology. How will transfer of the gaseous diffusion plants to a federal corporation change this conclusion?**

A. The prices charged by the Department of Energy are based on costs that, in part, have been determined by rigid Governmental policies and practices. These "costs," many of which are not directly related to production, have made the price of DOE enrichment services the highest in the world. This situation persists despite the fact that the DOE enrichment enterprise's actual factory cost of production is lower than that of its overseas competitors. Without restructuring, the artificial costs that burden the DOE enrichment enterprise would leave prices higher than those achievable by a new, independent enrichment plant using European Technology. Restructuring would create a federal corporation free of the present artificial restraints and place the domestic enrichment enterprise in a position to compete in the world market with superior cost-effectiveness, flexibility customer-responsive services, and lower prices.

Q. **Assuming that national defense requirements for enriched uranium can be met through scaled-back Government operation of the existing diffusion plants, do you believe that survival of the U.S. uranium enrichment enterprise to supply commercial enrichment services is necessary, and if so, why?**

A. Clearly, in today's market, without the considerable enrichment capacity the U.S. DOE enrichment program brings to the world market (it currently has 19.2 million SWU installed capacity or approximately 60 percent of the Free World enrichment capacity), there would be a shortage in world production capacity. Equally clear, however, is the fact that the European producers have the capability of expanding their operations rapidly to fill the vacuum that would result from a DOE withdrawal from the enrichment market (in particular, the gas centrifuge enrichment technology utilized by URENCO lends itself to efficient, modular expansion). By the time DOE's present contracts are fulfilled, it is very likely that overseas suppliers would be in a position to meet any demand that would exist. Therefore, from the standpoint of available enrichment capacity, enrichment customers would not be without economical supplies of SWU.

However, as we learned from the oil embargo of 1973, it is unwise to become dependent on overseas suppliers for our total energy requirements. Even friendly countries may develop policies that would compel them to interrupt supplies to a trade partner under certain circumstances (as has been demonstrated in the case of Australian uranium export practices). Additionally, it is desirable to retain several independent suppliers to maintain competition and prevent monopolistic pricing. We therefore submit that a large, healthy, competitive domestic enrichment program is in the best interests of the country. We urge Congress to take the necessary steps to assure that our enrichment enterprise becomes more competitive now so that it will be available as a useful competitive component of our energy picture in the future.

Q. **On page 4 of your testimony, you state that if we proceed on the same path, the U.S. uranium enrichment enterprise will continue to lose market share, jobs, export business, "and loss of a strong position for the control of this sensitive technology from a non-proliferation standpoint." Given the widespread availability and use of enrichment technologies around the world, how strong is the U.S. position at this time?**

A. Obviously, the entry of new participants into the international enrichment market has eliminated the monopoly the DOE enrichment program once enjoyed. This state of affairs should not, however, entirely compromise the program's

effectiveness as an arm of the U.S. Government's non-proliferation policy. In part, America's non-proliferation policies are served when the U.S. maintains sufficient enrichment capacity to assure those countries developing nuclear power infrastructures that enrichment services will always be available to them at reasonable cost and with good reliability. With 60 percent of the Free World enrichment capacity in the U.S., our country still maintains a significant leadership role in the non-proliferation area. Most of the enrichment capacity currently installed in Europe is devoted to European customers. Currently, the U.S. is still the primary source of uranium enrichment for civilian power plants in the Far East.

The real problems lay ahead in the future. How much the European suppliers increase their capacity and thereby become alternate sources for countries that choose not to comply with the principles of non-proliferation depends almost entirely on how the potential customers view three dimensions of the U.S. enrichment program: capacity, price, and customer service. Capacity has never been a problem for the U.S. program. But it was the program's image of poor cost competitiveness that permitted foreign suppliers to capture a portion of the market. Today, potential customers continue to scrutinize the program for signs of future reliability and competitive pricing policies. Without solid, positive steps--without restructuring--to assure the enrichment program's reliability and cost effectiveness, the DOE's overseas competitors will increase their capacity and become an alternative for not only foreign enrichment customers, but for American customers as well.

Q. **On page 5 of your testimony, you "recommend that Congress continue to allocate a portion of the DOE's uranium enrichment revenues to proceed rapidly to the next phase of AVLIS development, namely the completion of a pilot demonstration." Since AVLIS offers the potential for substantially lower prices for enrichment services which would benefit nuclear utilities, is it not appropriate that the utility industry should provide a significant portion of the costs of this demonstration, and if not, why not?**

A. It must be clearly understood that essentially every dollar spent on the AVLIS program has been paid for by the DOE's commercial customers through the prices paid for uranium enrichment. This is true, in fact, not only for the AVLIS program, but for the enrichment program as a whole. Utility

dollars support the entire non-military DOE enrichment enterprise and more. Despite the program's role as a tool used to further this nation's non-proliferation policies, the funding for serving those polices and supporting commercial operation come entirely from commercial fees. Moreover, every cent that has been required to be paid by utilities to the DOE under the Department's Utility Services Contract and prior contracts has been paid and paid in full. That the electric utility industry continues to pay for AVLIS justifies our concern and our insistence that something be done to assure that the program will be brought to fruition in a timely and effective manner. In our view the most effective way to accomplish this is to restructure the enrichment enterprise in order to restore its competitiveness and assure its survival in the future.

NATIONAL TAXPAYERS UNION

A NONPARTISAN, NONPROFIT ORGANIZATION DEDICATED TO THE PUBLIC INTEREST

325 PENNSYLVANIA AVENUE, SOUTHEAST WASHINGTON, DISTRICT OF COLUMBIA 20003 TELEPHONE AREA CODE (202) 543-1300

4 November 1988

Memorandum to Subcommittee on Energy Research and Development
From: National Taxpayers Union
Re: Questions for National Taxpayers Union submitted under cover letter of October 21, 1988, in connection with testimony at the Subcommittee hearing on Uranium Enrichment Legislation held October 6.

Three sets of questions were tendered to National Taxpayers Union in connection with the October 6 hearing on Uranium Enrichment Legislation. The questions are reiterated and answers are provided below.

Answers to "Additional Questions for Hearing on Uranium Enrichment Legislation" for National Taxpayers Union

1. On page 4 of your testimony you mention that the cost of decommissioning the existing enrichment plants will almost certainly exceed $ 3 billion. How did you arrive at this estimate?

Answer: The estimate is that of the government and the nuclear industry, not ours. The most extensive publicly available written evaluation of decommissioning costs of which we are currently aware is set forth in GAO, Uranium Enrichment: Congressional Action Needed to Revitalize the Program 18-19 (Oct. 1987). GAO noted that the estimated total decommissioning cost of Oak Ridge was about $ 1.17 billion, plus an interim $ 66.4 million to place the plant "in safe storage" and additional millions annually to maintain it there. GAO noted estimates of $ 179 million to $ 355 million to clean up "more than 90 areas" currently contaminated at the various plants. In addition, GAO stated that the cost for decommissioning "may exceed $ 1 billion for each plant." Conversations with GAO and Executive Department officials confirm that the total cost will almost certainly exceed $ 3 billion, or $ 1 billion per plant. We have heard estimates as high as $ 3 billion per plant. DOE has failed to recover any of these costs from its customers, and has indicated to GAO that it will not do so until it "decides to decommission the plant." GAO, supra, at 20. This approach by DOE violates section 161v. of the Atomic Energy Act, basic business principles

and fundamental fairness. It in essence means taxpayers rather than DOE customers will be compelled to bear these costs. The U.S. Council for Energy Awareness (a nuclear industry "information" organization), in its lobbying document entitled "U.S. Uranium Enrichment, The Case for Restructuring" (May 1988) at page 13, also gives the estimated costs for decommissioning the DOE enrichment plants at $ 1 billion per plant, and acknowledges that DOE has failed to recover any of those costs, or the estimated $ 179 million to $ 355 million for "decontamination" expenses. In short, all appear to agree that total decommissioning and clean up costs will almost certainly exceed $ 3 billion, and that DOE has not reserved anything for these expenses, or included any of these expenses in the price it is charging its customers.

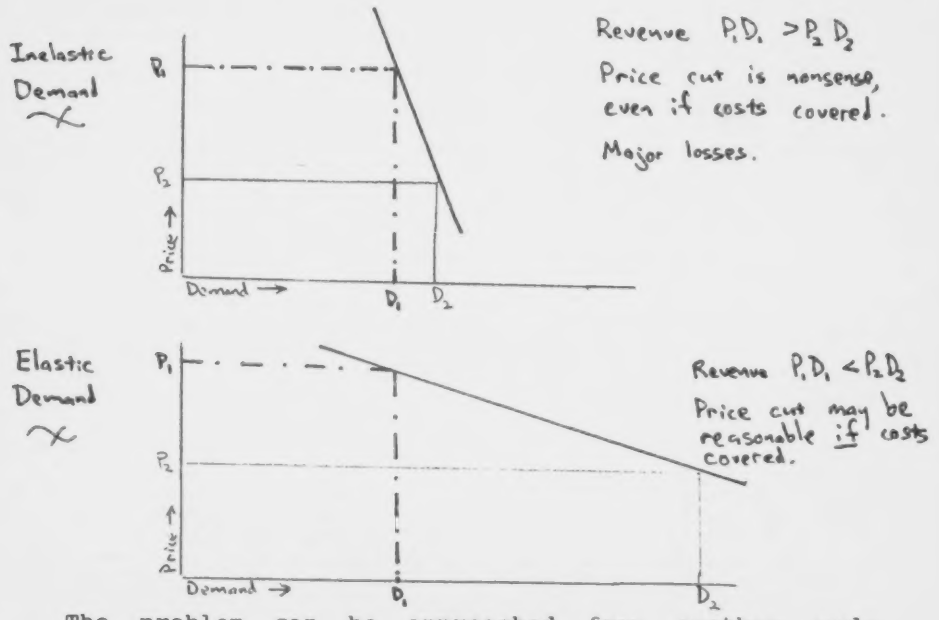
2. On page 4 of your testimony you recommend a board of directors for the federal corporation. How would this board be selected?

Answer: In order to protect the federal government's (taxpayers') investment in the enrichment program, in order to remedy some of the many mistakes of the past and in order meaningfully to restructure the program to prevent a recurrence, National Taxpayers Union recommends that the corporation holding the federal uranium enrichment assets be organized under the laws of a particular state and resemble a private for-profit business corporation to the extent possible. As with a private company, the board of directors should assure that the enrichment enterprise maximizes value for its shareholders -- the taxpayers. As with a private company, the investors -- again the taxpayers-- should select the board. As applied here, this means that the Treasury Department as the de facto holder of the taxpayers' proxy should appoint the board in proportion to the taxpayers' interest in the corporation. A good model for how to do it is H.R. 5181, 100th Cong., 2d Sess.

3. On page 5 of your testimony you oppose the concept of maximizing market share for any enrichment corporation. Why wouldn't the maximization of market share necessarily equate [to] maximization of profits?

Answer: Maximization of market share generally means a strategy which includes cutting prices to increase sales. But if demand is "inelastic" on the margin, significant price cuts are required to generate additional sales. The overall revenues of the business can in fact go down, while costs if anything increase. The net effect is needless losses and the precise opposite to maximization of profits. See E. Mansfield, Microeconomics (2d ed.). Demand for DOE enrichment services is obviously inelastic on the margin. The European market has been for some time largely captive to the European enrichment consortia. DOE price reductions aimed at enhancing market share

have not attracted increased business and have instead resulted in substantial losses.



The problem can be approached from another angle. Maximization of market share through price cuts is sometimes thought to be the objective of an enterprise which has or seeks monopoly power, because once the market is "captive," the enterprise hopes to raise prices without fear of competitors and extract a monopoly profit. However, DOE argues that it lacks monopoly power. Thus, the agency appears to admit it cannot raise prices at some future time. Thus, a policy of maximizing market share to attain monopoly power is doomed at its inception, and will merely lead to losses.

National Taxpayers Union believes that a good argument could be made that DOE is following a de facto strategy of maximizing taxpayer losses. According to Martin-Marietta consultant Booz, Allen and Hamilton, the agency is cutting its prices without adopting strategies for long-term growth and profit. Indeed, Booz, Allen witnesses have characterized DOE as pursuing a "harvest" strategy, involving running the enterprise into the ground at minimal return to the Treasury. This will presumably continue until all asset values are exhausted, and "off-budget" expenses like decommissioning costs, which will be thrust on the taxpayers, are maximized. This approach maximizes destruction of

wealth and taxpayer losses.

4. On page 6 of your testimony you recommend wage and salary bonuses if payment[s] to the Treasury are made and a profit returned. Would this recommendation be in lieu of mandating a specific payment to the Treasury to repay any "debt" that may exist?

Answer: National Taxpayers Union supports recovery of as much of the "debt" as possible. That "debt" at the very least is a measure of the direct and indirect subsidies provided by the U.S. taxpayer to the federal enrichment program in contravention of section 161v. of the Atomic Energy Act and representations of the civilian nuclear utilities concerning the payment of civilian enrichment costs with respect to the federal enrichment program. National Taxpayers Union strongly supports bonuses for enrichment personnel who in fact recover the "debt," as opposed to the current system which has rewarded employees who have greatly contributed to the "debt." We do not support, and will not support legislation, which (1) does not require specific payments to the Treasury sufficient to recover at least a significant portion of the "debt" and (2) which does not incorporate incentives and safeguards to assure that repayment schedules are met and that in addition there is as much recovery of the remaining portion of the "debt" as possible. As a corollary to these principles, we thus definitely do not regard bonuses as a substitute for specific repayment requirements.

National Taxpayers Union supports legislation (H.R. 5181) submitted in the 100th Congress which treated a portion of the "debt" as a loan by the Treasury to the enrichment enterprise. This loan was required to be paid off. Another portion of the "debt" was treated as "preferred stock" potentially convertible into a loan which must also eventually be paid off. Finally, another portion of the "debt" was in effect "written off" but incentives and safeguards were incorporated to prompt management to make as much additional money as possible. One of the key safeguards was the clear requirement that the corporation operate to maximize value. One of the key incentives was management bonuses in the event repayment schedules for interest, principal, and preferred stock dividends were met, and payments were made toward an adequate reserve for the decommissioning expenses associated with the enrichment plants. Further bonuses were provided in the event of an additional "profit." Other incentives were also incorporated. National Taxpayers Union supported all those incentives. The managers of federal enrichment assets, like the managers of a private company, should pay the debts of their enterprise and attempt to show a profit. Like the managers of a well run private company, they should be rewarded when they do so, and only when they do so.

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Answers to "Questions for the Record by Republican Members" for National Taxpayers Union

1. You support H.R. 5181 which also establishes a Government corporation for the U.S. uranium enrichment enterprise. Why do you believe that any Government corporation can remain depoliticized"?

Answer: Obviously no Government corporation can remain "depoliticized" in the sense of complete divorcement from the political process. However, a corporation holding government uranium enrichment assets can be established in a fashion such that all the guidelines and incentives in the organic act for the corporation require that corporation, and encourage it, to behave as if it were "private," that is, as a profit-maximizing and loss minimizing entity. When we use the term "depoliticized" in conjunction with an enrichment entity, we have in mind an entity which pursues profit maximization (or loss minimization) as its goal, to the extent consistent with environmental obligations, rather than other goals, such as feather bedding, subsidization of nuclear fuel prices, and so on.

Obviously the pursuit of a medley of political goals as opposed to profit maximization has resulted in a near squandering of taxpayer assets in the federal enrichment program and the accumulation of what amounts to over $ 9 billion in unrecovered costs in addition to at least $ 3 billion in unfunded decommissioning liabilities. This has been a recipe for disaster. National Taxpayers Union accordingly supports in the strongest terms de-politicizing the program and focussing it on profit maximization and protection of taxpayers from further enormous losses.

H.R. 5181 sets up a corporation which is light-years closer to that objective than anything else before the 100th Congress.

2. Would you also support legislation which would privatize the U.S. uranium enrichment enterprise, and if not, why not?

Answer: As indicated in our written and oral testimony, National Taxpayers Union supports privatization of the uranium enrichment enterprise. However, no one would buy the enterprise in its current condition (DOE could not get a single offer for it when the agency solicited interest a couple years ago), and National Taxpayers Union opposes simply giving it away, or selling the best parts with the taxpayers having to assume all the liabilities and losses. H.R. 5181 is consistent with privatization. It sets up a for-profit corporation organized under the laws of a state with a board of directors. Once the corporation is on its feet, and value is restored to the enterprise, Congress can authorize sale. But if sale for some reason is not authorized, at least taxpayer losses will be minimized in the interim.

H.R. 4934, H.R. 4975, and H.R. 4489 are inconsistent with

privatization. They do not set up a true corporate structure capable of privatization. They do not direct what they do set up to behave in a fashion consistent with privatization. And they transfer whatever value is left in the enrichment enterprise to other elements of the nuclear fuel industry. In short, H.R. 4934, H.R. 4975, and H.R. 4489 are worse than the status quo from the point of view of privatization of the uranium enrichment enterprise.

3. Assuming that national defense requirements for enriched uranium can be met through scaled-back Government operation of the existing diffusion plants, do you believe that survival of the U.S. uranium enrichment enterprise to supply commercial enrichment services is necessary, and if so, why?

Answer: As we understand the Department of Energy and the utility industry, they both now argue that the nuclear fuel business is now principally a matter of the market. We agree, so long as due recognition is paid to the principle in section 161(v) that taxpayers are not to underwrite the fantasies of nuclear fuel buyers, sellers and contractors, past, present or future. Assuming defense needs are met (which is an assumption readily met by reality), the "survival" of the U.S. uranium enrichment enterprise should be a matter for U.S. nuclear utilities and other civilian customers of DOE to decide. In testimony before Congress, U.S. utilities appear to be taking the position that they are unwilling to pay the costs associated with U.S. uranium enrichment and that they accordingly will go abroad for allegedly cheaper enrichment services. If there is substance to this statement rather than bluff, it means that the U.S. nuclear utilities are themselves claiming that the "survival" of the U.S. uranium enrichment program is not of sufficient importance for them to be willing to pay anything for it. Under these circumstances, National Taxpayers Union certainly sees no reason for taxpayers to subsidize the enrichment program. In this sense, the "survival" of the program is not "necessary." If the utility industry really desires "survival" of the U.S. enterprise, and, as a corollary, if the industry's de facto position that the program is not "necessary" is mere bluff designed to extract taxpayer subsidies, the bluff should be called. The DOE price for enrichment should be raised above its current non-compensatory level, and taxpayer subsidies refused. For what it is worth, National Taxpayers Union believes that on balance U.S. utilities and some other utilities would pay a reasonable premium for U.S. enrichment services.

The current federal program has accumulated enormous unrecovered costs as well as unfunded decommissioning liabilities. Whether the survival of the program is deemed necessary or not, Congress should not simply let the program grind into oblivion, but should instead, as H.R. 5181 would do, restructure the program so that it will recapture value for the taxpayer. National Taxpayers Union feels that a program so

restructured would survive, whether or not such survival is "necessary."

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Answers to "Questions for National Taxpayers Union"

1. In your view, would H.R. 4934, H.R. 4975, or H.R. 4489 restore the viability of the domestic uranium industry?

Answer: National Taxpayers Union defers to the views of Mr. Edward Farley of Atlas Corporation, for three decades a uranium producer in Utah. Mr. Farley has repeatedly testified that the legislation referenced would not restore the viability of the domestic uranium industry and in essence is instead designed to enrich particular companies which are already viable. A copy of recent testimony on this legislation by Mr. Farley is attached.

2. What would be the impact of these bills on the federal enrichment program?

Answer: The three pieces of legislation codify DOE's current disastrous policies, while diverting to private uranium companies close to $ 2 billion in enrichment program assets or money which the utilities which are customers of DOE might otherwise pay for enrichment services.[1] In short, the three

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[1] The $ 2 billion figure arises as follows: the nuclear utilities would be required, by H.R. 4975 and H.R. 4489, to pay $ 1 billion to the domestic uranium industry to pay for stabilization of uranium mill tailings and the purchase of uranium for the federal stockpile at prices which are roughly double the current spot market price. The utility industry has openly testified that if this $ 1 billion in payments is made to the uranium industry, the utility industry will demand $ 1 billion less in charges for uranium enrichment. At the same time the utilities are diverting $ 1 billion from the enrichment program (taxpayers), the federal government would distribute the bulk of the current federal uranium stockpile at a price of about $ 9 per pound, about half the market price. DOE claims, through use of accounting gimmicks, that distribution of the federal uranium stockpile at $ 9 per pound somehow pays for federal purchases of uranium for the stockpile at $ 25 to $ 30 per pound. If one sells three pounds at $ 9 to buy one pound at $ 27, we agree there is a "wash" in terms of dollars of additional appropriations, but the taxpayer loses 2/3 of his or her assets. This is not a "wash" but in the nature of deception. The economic effect of the proposed distribution/buy program is a huge taxpayer loss, which we estimate in the range of $ 500 million to $ 1 billion, depending on how much federal uranium is

bills would not correct past abuses, would codify them, and would rob the program, and strip the taxpayer, of any value left. Further, the $ 2 billion diversion, as indicated in response to question 1, would not assist in restoring employment in the uranium industry. No one has identified a public policy justification for the three bills, or any portion of the three bills, which can withstand even superficial analysis.

3. How would the approach recommended by the National Taxpayers Union affect electricity ratepayers?

Answer: Because enrichment costs are such a small part of the costs of nuclear-generated electricity, and because nuclear supplies only about 20 % of U.S. needs, the impact on the average ratepayer of a more reasonable approach to the pricing of federal uranium enrichment services would be negligible. Removing taxpayer subsidies for enrichment would increase some enrichment costs, but the impact on a kilowatt/hour delivered basis would be less than the disposal fee charged under the Nuclear Waste Policy Act. The nuclear utilities assert that fee is insignificant for ratemaking purposes. Our more detailed analysis, which no party has yet refuted, is as follows:

DOE has claimed that it plans to recover decommissioning costs and to repay at least $ 3 billion in asset value to the Treasury. The restructuring proposed under the NTU-supported Eckart-Miller bill would not require much more during the first decade. However, DOE has yet to recover any decommissioning costs and has yet to make any net repayments to the Treasury. Assuming that the agency will have to charge or reprogram an additional $ 100,000,000 per year for decommissioning costs; an additional $ 420,000,000 per year for "return on investment" and repayments to the Treasury with respect to the $ 3 billion in asset values it has not purported to "write-off"; and an additional $ 300,000,000 for the values it has unlawfully "written-off", then the total additional payments and reprogramming would be some $ 820,000,000 annually. Assuming sales of 10 to 11 million "separative work units ("SWU's") of enrichment annually, this works out to a maximum of approximately $ 70 to $ 80 per SWU. Some of this is, or could be, recovered

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distributed at prices below market. Finally, the federal government would also pay some $ 450 million to the uranium industry for tailings reclamation and/or uranium purchases. The total taxpayer loss thus equals or exceeds $ 2 billion. This is a lot of money for no apparent purpose. NTU also notes that proponents of subsidies for the nuclear fuel industry frequently cite national security interests. If there is such an interest, it is unclear how it is served by the wholesale diversion of the federal uranium stockpile as contemplated by DOE. The diversion is like the thirteenth chime of a clock; it calls into question not only itself but all with which it is associated.

with DOE's current prices. Let us assume that the enrichment entity had to raise its price an additional $ 40 per SWU to recover the full amount. The total impact on rates, using a formula employed by DOE,[2] would be approximately 0.8 mils (less than a tenth of a cent) per kilowatt hour of nuclear generated electricity. Average utility reliance on nuclear generated electricity is less than 20 %. Thus the actual increase in costs for electricity would be no more than 20 % of 0.8 mils/kwh, or less than 0.16 mil/kwh. This amount is too trivial to impact ratepayers. It works out to a little over a dime a month,[3] if it is all passed on, to the average ratepayer.

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[2] According to DOE, Projected Costs of Electricity from Nuclear and Coal Fired Power Plants (DOE/EIA 0356) (Nov. 1982), the raw material and service components of nuclear fuel per million kwh of nuclear generated electricity are as follows, assuming 3% enrichment:

70.1	pounds of yellowcake (U3O8)
26.9	kgU of UF6 conversion services
21.72	SWU of enrichment services (.20 tails assay)
4.5	kgU of fabrication
4.5 kgU	of spent fuel disposal

Calculating average nuclear fuel costs is a matter of arithmetic based on the above technology based numbers. Average fuel cost at what are roughly current conditions of $ 120/SWU enrichment and $ 20/U3O8) is about 6.05 mils/kwh. 2.6 mils is attributable to enrichment. The price increases 0.2 mils/kwh for each $ 10 increase in SWU price. If SWU's go to $ 160, the enrichment price is about 3.4 mils/kwh.

[3] 0.15 mil/kwh equals 0.015 cent/kwh. According to DOE, average U.S. household electricity consumption was 708 kwh/month in 1984. See 1985 DOE Annual Energy Review (DOE 0385). 0.015 cents times 708 works out to less than 11 cents per month, assuming the unlikely case in which all are passed on.